Alberta Naturalist

University of Alberta Library
0 1620 2115 0303

vol.6 no.1 march, 1976

ALBERTA NATURALIST

VOLUME 6 NUMBER 1 MARCH, 1976

TABLE OF CONTENTS

Cover 1
From the Editor, by Virginia Lang 1
From the Associate Editor, by Martin K. McNicholl 1
Sighting of a Red Phalarope near St. Albert, Alberta by G.R.A. Ebel 2
1975 Alberta Flowering Dates, by C.D. Bird 3
Alberta Christmas Bird Counts, 1975, compiled by Virginia Lang 28
Highlights of Fall, 1975, Bird Migration, Southern Alberta, by Rudi Butot 28
Faunal Observations for North-Central Alberta: Autumn 1975 - Birds, by G.R.A. Ebel 30
- Mammals, by John Acorn 36
Recent Publications on the Natural History of Alberta (15), compiled by Martin K. McNicholl 37
Naturalists' Bookshelf (17): The Butterflies of North America. Reviewed by Norbert G. Kondla 41
Naturalists' Bookshelf (18): Manitoba Bird Studies: A Bibliography of Manitoba Ornithology. Reviewed by D.V. (Chip) Weseloh 44
Provincial Museum News for Naturalists (2), by D.A.E. Spalding 45
FAN News, Reports, Projects:
Provincial Species Count Day: Birds, Mammals & Plants in Flower, by D.V. (Chip) Weseloh 47
Upcoming FAN Field Meetings & Activities, by John M. Powell ... 50
Alberta Naturalist Guide Committee Report, by Lloyd Lohr 54
Report of the Red Deer River Dam Environmental Conservation Agency Hearings 54
Report of the Publications Committee, February 1976, by Martin K. McNicholl 55
Resolutions 56
Club Library Relocated 57
Club News 57
Notes and News 62
Overheard (49), (50) 31, 53

ISSN 0318-5540

Postage paid at Edmonton, Alberta, under Second Class Mail Registration Number 3604

COVER - KILLDEER (CHARADRIUS VOCIFERUS)

by Ludo Bogaert

The Killdeer is one of Alberta's commonest breeding birds, and one of the first arrivals in spring. Ludo is Past President of the Edmonton Bird Club, and a staff artist at the Provincial Museum, where his diorama on Ruffed Grouse has recently been opened. He has contributed several covers to the "Alberta Naturalist" in the past.

FROM THE EDITOR

I'd like to welcome our newest Corporate Member, the High River Naturalists. They are a keen group, and have much enthusiasm and energy to offer the Alberta natural history scene.

Effective February 15, I am resigning as Editor of the AN. I want to thank all of you who have given so much assistance during the past 2½ years. I especially want to thank our Associate Editors, Jim Case and Martin McNicholl. Their hard work has been instrumental in getting the AN out each quarter. I ask that you give our new Editor as much support and encouragement as you've given to me.

- Virginia Lang

FROM THE ASSOCIATE EDITOR

I would like to take this opportunity to thank Ginny Lang for the excellent job she has done in editing the AN during her term as Editor. Virginia is in large measure responsible for the fine quality presently enjoyed by both the AN and the Calgary Field Naturalist, which she edited previously. We shall miss her as Editor, but look forward to her promised continuing participation.

As Chairman of the Publications Committee, I shall act as Interim Editor until such time as either I leave the province or the new Editor(s) is (are) appointed at the next Annual General Meeting of the Board. We hope to greatly expand our Editorial Board by having an Associate Editor representing each member club. A good start is the addition of the Editors of the Calgary Field Naturalist and Edmonton Naturalist, Barbara Danielson and D.V. (Chip) Weseloh, respectively. I welcome these enthusiastic contributors to our board. The expanded board will commence duties with the June issue. May we hear from you all! And Good Luck, Ginny!

- Martin K. McNicholl

SIGHTING OF A RED PHALAROPE NEAR ST. ALBERT, ALBERTA

by G.R.A. Ebel, 8016 - 180 Street, Edmonton

On November 11, 1975, my wife and I were birding along the east shore of Big Lake near the St. Albert sewage lagoon. At 1530 hour a white and grey bird flashing white wing strips suddenly appeared and landed in open water some 100 yards offshore. It proceeded to feed for about one minute, spinning and dabbing as it swam a short distance. It was easily identified as a phalarope in winter plumage. The following notes were entered in my field book: "head white except the grey (dark) hind crown; facial area behind eye, a grey patch; bill short and somewhat enlarged at the base; back unstreaked and uniformily grey as are wings except for the white prominent wing strip; white rump patch divided by dark grey (black?) tail feathers; a peete or wheet call note heard as bird flew along the marsh grass in a southerly direction." This description corresponds to those of the Red Phalarope by Godfrey (1966), Peterson (1961), and Salt and Wilk (1966). This bird was observed in good lighting conditions through 9 x 35 binoculars and a 20-60 zoom spotting scope.

Red Phalaropes are common migrants along both coasts of North America. They are regarded as rare or irregular anywhere in the interior (Bent, 1927; Godfrey, 1966; Peterson, 1961) but have been reported from several places in Alberta (Salt and Wilk, 1966). Fall sightings in the province have been in September at Didsbury in 1903 and Beaverhill Lake in 1925 (Salt and Wilk, 1966) and in October at Carseland Reservoir, approximately 30 miles southeast of Calgary in 1966 (Smith and Klauke, 1967).

Literature Cited

Bent, C. 1927. Life Histories of Northern American Shore Birds. Part I. (Dover report, 1962). 420 pp.

Godfrey, W. 1966. The Birds of Canada. National Museum of Canada. Bull. No. 203. 428 pp.

Peterson, T. 1961. A Field Guide to Western Birds. Houghton Mifflin Co., Boston. 309 pp.

Salt, W., and A.L. Wilk. 1966. The Birds of Alberta, Queen's Printer, Edmonton. 511 pp.

Smith, W., and R. Klauke. 1966. A Sight Record of the Red Phalarope in Alberta. Blue Jay 25: 25-26.

UNIVERSITY LIBRARY
UNIVERSITY OF ALBERTA

1975 ALBERTA FLOWERING DATES

by C.D. Bird

This article summarizes the results of the Federation of Alberta Naturalists' phenology project of 1975. The project started in 1973 (Alberta Naturalist 4:7-14) when 85 people took part and 100 plants were reported. It continued in 1974 (Alberta Naturalist 5:5-23) with 91 participants and covered 90 species. In 1975 there were 150 participants.

The 84 species reported herein are six fewer than last year; the deletions being species that have been consistently sparsely reported and/or ones which have given some trouble in identification. The order is based on an average of the first flowering dates for the three study years. Enough data has been accumulated to allow innovations of this sort to be made.

The twenty-six reporting areas employed this time include a number of new ones due to data coming in from additional regions but also represent some amalgamations and a few rearrangements of previous areas. Dates are given for the three study years and have been sorted out so as to correctly apply to new or altered areas. The areas, with the locations they include are (1) Waterton Lakes National Park - Waterton; (2) Milk River - Onefour, Police Creek, Writing-on-stone; (3) Cardston - Beazer, Cardston, Carway, Mountain View, Police Outpost Provincial Park, Woolford Provincial Park; (4) Crowsnest Pass - Beaver Mines, Bellevue, Blairmore, Burmis, Coleman, Cowley, Frank, Hillcrest, Lundbeck, Pincher Creek; (5) Cypress Hills Provincial Park - Elkwater, Thelma; (6) Lethbridge - Brocket, Carmangay, Champion, Chin Coulee, Del Bonita, Fort Macleod, Johnston Creek, Lethbridge, Lomond, Magrath, Raymond, Shanks Lake, Taber, Travers, Vulcan; (7) Medicine Hat - Bowmanton, Brooks, Buffalo, Dinosaur Provincial Park, Hilda, Seven Persons; (8) Porcupine Hills - Cayley, Claresholm, Nanton, Pine Coulee, Porcupine Hills, Stavely, Willow Creek Provincial Park; (9) Turner Valley - Bragg Creek, Brown-Lowery Provincial Park, Longview, Pekisko, Priddis, Turner Valley; (10) Bow-Crow Forest Reserve - Barrier Lake, Beaver Flats Campground, Cat Creek, Cataract Creek Campground, Elbow Lake, Kananaskis Lakes, Pasque Mountain, Plateau Mountain, Trap Creek; (11) Calgary - Balzac, Beddington, Calgary, Carstairs, Cochrane, Crossfield, DeWinton, Didsbury, Morley, Olds, Springbank, Wildcat Hills Provincial Park; (12) Canmore - Exshaw, Lac de Arcs, Seebe, Spray Lakes, Yamnuska Natural Area; (13) Drumheller - Beynon, Carseland, Dalemead, East Coulee, Gem, Hand Hills,

			Waterton Lakes National Park	Milk River Area	Cardston Area	Crowsnest Pass Area	Cypress Hills Provincial Park
Elevation			4200'	3200'	4400'	4200'	4100'
mid-Spring	*Anemone patens* var. *wolfgangiana*	1973		Ap5	My11	Ap4-My19	Ap26-Jn12
	Prairie Crocus	1974				My27 Se7	Ap20-My19
		1975		My18	My18-My30	Jn1	Jn27
	Populus tremuloides	1973					
	Aspen	1974				Ap21	
		1975					
	Fritillaria pudica	1973		Mr31-Ap4	My11	Ap10-My30	
	Yellow Bells	1974				Ap17-My27	
		1975		My10-My18	My18-My30	Jn1	
late Spring	*Viola adunca*	1973			My11	My12	My13-Jn11
	Early Blue Violet	1974				My10-27	My19
		1975	My31	My18-Jn9	My30-Jn17		Jn27
	Shepherdia canadensis	1973				My19	
	Canada Buffalo-berry	1974					
		1975		My18	My30		
	Ranunculus rhomboideus	1973					My 13
	Prairie Buttercup	1974					My 19
		1975				Jn1-Jn3	
	Thermopsis rhombifolia	1973		Ap1-Ap13	My11	Ap20-My10	Jn5
	Golden Bean	1974			Jn21	My4-My27	My19
		1975		My18-Jn12	My25-Jn26		Jn27
	Potentilla concinna	1973			My11	Ap13-My19	My13
	Early Cinquefoil	1974			Jn21	Ap25-My27	My19
		1975		My18	My18-My30		
	Phlox hoodii	1973		Ap1-Ap13	My11-Jn6	Ap23-My19	My13
	Moss Phlox	1974			Jn21	Ap24-My27	My19
		1975		My18-Jn12	My18-Jn9		
	Geum triflorum	1973			Jn5	My2-My19	Jn5-Jn12
	Three-flowered Avens	1974	Jn29		Jn21	My12-My27	My19
		1975		My18-Jn12	My18-Jn26	Jy11	Jn27
	Viola nuttallii	1973			My11-Jn5		My13-Jn2
	Yellow Prairie Violet	1974		My10		My3-My27	My19
		1975		My18-Jn12	Jn9	My28	Jn27
	Populus balsamifera	1973					
	Balsam Poplar	1974				Ap21	
		1975			Jy20		
	Androsace septentrionalis	1973			My11	My19	
		1974				My27	My19
	Fairy Candelabra	1975				My28-Jy27	Jn27
	Arctostaphylos uva-ursi	1973				My19	
	Common Bearberry	1974					My19
		1975	Jy1		My30		
	Fragaria virginiana	1973				My28	My27-Jn5
	var. *glauca*	1974	Jn29		Jn21	My25-My27	My19
	Wild Strawberry	1975	Jy1-Jy28		My30-Jn17	Jy27	Jn27
	Ribes oxyacanthoides	1973			Ap12		
	Wild Gooseberry	1974					
		1975			My30	My29	

Lethbridge Area	Medicine Hat Area	Porcupine Hills Area	Turner Valley Area	Bow-Crow Forest Reserve Area	Calgary Area	Canmore Area	Drumheller Area
3100'	2200'	3500'	3900'	6000'	3500'	4200'	2300'
Mr24-My12			Jn9-Jn16		Mr16-Jn17	Ap10-My27	Ap1-My12
					Au25-Se29		
Ap17-Ap25	Ap7-Jn9	Ap7-Jn9	Ap12-Jn1		Ap6-Jy17	Ap15-Jn16	My4-My11
	Se6	Se6	Se21		No1-No11		
My15-My19		My15	My16-Jn7	My11-Jy14	My4-Jn7	My18-Au1	
		Au28				Oc19	
					Mr24-My13	Ap10-My14	My5-My12
		Jn6			Ap13-My1	Ap15-Ap25	
					My11	My18-My28	
Ap10-Ap20							
Ap14-Ap25		Ap24-Jn2					
My15-My19		My15-My28					
My20			Jn9-Jn16		Ap15-Jn6	My8-My21	My5-Jn3
My15-My27		My13-Jy3	My5-Jn24		Ap29-Jn15	Ap28-Jn16	My12-My25
		My23-Jn6	My31-Jn22	My20-Jn28	My21-Jn15	My18-Jy1	Jn18
			Jn16		Ap18-My13	My8	My5-My12
		My8	My25		Ap15-Jn5	My5-My6	My4-My11
My15		Jn1-Jn6	My31-Jn7	My29-Au31	My22-My25	My18-Jn22	
		My1			Ap20-Jn2		My12
		Ap17-My27		My19	Ap18-My27		
		My15-My23	My31-Jn7		My11-Jn15	My18-My28	
Ap7-My4	My1	My12-My13			My1-Jy9	My27	My5-Jn3
Ap24-My14	My11	Ap24-Jy3			Ap20-Jn29	Ap23-Ap30	My4-Jn15
My15-Jn17		My28-Jy3		Jn8	My21-Jy10	My19-Jn29	My19-Jy1
Ap20-My11		My6	Jn9-Jn16		Ap7-Se8	My6-My21	My5-My21
Ap25		Ap29-My30	My25-Jn1		Ap14-Jn9	Ap25-Jn16	My11
My15-Jn1		My15-Jn6	My31-Jn7	Jn24	My11-Jn9	My18-Jn8	My19-Jn16
Ap1-My10		My1	Jn9-Jn16		Ap8-Jy9	My16	Ap14-Jn3
Ap20	My11-Jn2	Ap17-My30	My25-Jn1		Ap18-Jn19	Ap30-My25	My4-Jn16
My9-Jn17		My15-Jy1	My31-Jn7	Jy6	My11-Jn9	My19	My19-My30
Ap20-My20		My1-Jy6	My29-Jn16		My8-Jy4	My9-Jn17	My5-My24
Ap23-Ap25	Ap26-Jy12	My8-Jy3	My25-Jn23		Ap29-Jn20	My14-Jn16	My4-Jn23
My15-Jn17		My15-Jy18	My16-Jn22	My29-Jy9	My24-Jy13	My18-Se21	Jn16-Jn18
Ap20-My10		My13	My24		My2-My18		My7-My30
Ap25	My11	Ap24-My30	My25-Jn1		My4-Jn5		My11-My16
My21-Jn17		My28-Jn6	My31		My22-Jn9		My30
					My1-My13	My8-My15	
			My25		Ap25-My5	Ap28	
			My31		My25	My18-My25	
		My1-Jy8	Jn9-Jn16		Ap24-Jn22	My27-Jn17	My5-My13
My13	My30-Jy3	My30	My25-Jn1		My2-Jy13	Ap17-Jn16	My11-My12
My18		My23-Jy1	My16-Jn8	My29-Jy16	My25-Jy13	My18-Au24	My30
		My12-My13	My29-Jn16		Ap20-Jy4	My14-My21	
			My25-Jy1		Ap30-Jn3	Ap28-Jn16	My12-My25
		Jn1-Jn6	My31-Jn8	My25-Jy16	My22-Jn7	My18-Jy1	Jn18
			Jn9-Jn16		My3-Se29	My21-My27	
		My27-Jy3	My25-Jn23		My5-Jy13	My21-Jn16	
My15		My28-Jy3	My31-Jn22	My29-Au14	My24-Jy10	My25-Se21	My30-Jn18
Ap25				Jn9-Jn16	My1-My14	My14	My5-My13
Ap25		My8		My25-Jn1	Ap23-Jn30	My27	My11-My12
Jn17		Jn1-Jn6	My31-Jn7	Jn9-Jy9	My22-Jn29	My27-Jn24	My19-My30

			Banff National Park	Red Deer Area	Rocky Mountain House Area	Wainwright-Vermilion Area	Stettler Area
	Elevation		4500'	2800'	4000'	2000'	2700'
mid-Spring	*Anemone patens* var. *wolfgangiana* Prairie Crocus	1973		Ap9			
		1974	Ap24	Ap10-Jn2 Au20	Ap28		Ap28-My25
		1975	My24-My25	My20-My26		Se19	Ap26
	Populus tremuloides Aspen	1973		Ap22			
		1974		Ap24-Ap28			Ap26
		1975	My24-My25	My20	Jn1		
	Fritillaria pudica Yellow Bells	1973					
		1974					
		1975					
late Spring	*Viola adunca* Early Blue Violet	1973		My5-My23			
		1974		My12-Jn18	My24-Jy5	Jn17	My12-My26
		1975	My24-Jy4	My20-Jn18	Jn1-Jn13	My31-Jn14	My13-My31
	Shepherdia canadensis Canada Buffalo-berry	1973					
		1974	Ap29	Jn1	My25-Jn12		
		1975	My24	My20-My24	Jn1		My26
	Ranunculus rhomboideus Prairie Buttercup	1973		My1-My23			
		1974		Ap30-Jn2	My29-Jy7		My7-My26
		1975		My20-My24	Jn1	Jn7	
	Thermopsis rhombifolia Golden Bean	1973		My16-My27			
		1974		My22-Jy2			My7-Jn25
		1975		My25-Jy15		My31-Jy12	My19-Jn25
	Potentilla concinna Early Cinquefoil	1973					
		1974		My26-Jn2			My25-My26
		1975	My24	My20-My24		Jn4-Jy26	My19-Jn19
	Phlox hoodii Moss Phlox	1973					
		1974					
		1975	Jy8				
	Geum triflorum Three-flowered Avens	1973		My25		Jn17	
		1974	Jn4	My15-Jy2	Jn27		My20-My26
		1975		My30-Jn18	Jn1-Jn13	Jn4-Jn19	My19-Jn22
	Viola nuttallii Yellow Prairie Violet	1973					
		1974		Jn2			
		1975		My20-My24			
	Populus balsamifera Balsam Poplar	1973		Ap25			
		1974		My6			
		1975	My24-My25	My24	Jn1		
	Androsace septentrionalis Fairy Candelabra	1973		My27-Jn17			
		1974	Jn4	My20-Jn2	My29-Au26		My20
		1975	Jy8	My20-Jn25	Jn1	My19-Jn14	Jn14-Jn22
	Arctostaphylos uva-ursi Common Bearberry	1973		My16			
		1974	Jy20	Jn2-Jn19	My25-Jy5		
		1975	My24-My25	My30	Jn1		
	Fragaria virginiana var. *glauca* Wild Strawberry	1973		My27-Jn5			
		1974	Jy21-Se22	My25-Jn23	My23-No3		My25
		1975	My25-Se13	My20-Jy12	Jn1-Jy25	My31-Se19	My26-Jn25
	Ribes oxyacanthoides Wild Gooseberry	1973		My27			
		1974		My26-Jn2	My29-Jn20		My25
		1975		Jn15-Jy12		My31-Jn5	

Camrose Area	Jasper National Park Area	Edmonton Area	Whitecourt Area	Athabaska Area	Cold Lake Area	Peace River Area	Fort McMurray Area
2400'	3500'	2200'	2200'	1900'	1800'	2200'	1000'
Ap17-My13 Ap4-My30 Ap27-My18	Ap9	Ap15-My10 Ap4-Ap28 Ap30-My3	My6		My12	My5	
Ap17-Ap26 Ap20-Ap28	Ap29 My12	Ap3-My5 Ap21-Ap24 My3					
My20 My20 My18	My12-Jn24	Ap27-Jn16 My24-Jn2 My1[illegible]-Jn8	My14-My25		My26-My30	My11-Jn22	My29-Jn15
	Ap29-Jn1 My12	Ap20-My13 Jn29	My6 Ap28-My24		My13		
My13 My30	Jn17 Jn24	Ap20-My17 My11 My3	My13				
My13-My27 My20 My19		My13-My19	Jn3				
My13 My20 My19	Jy6						
			Ap26				
My21 My20-Jn2 My18	My23 Jn24					My13-Jy27	
	Ap30 My12	Ap18-Ap27 Ap27 My3-Jy1				Jn5	My5
My13 My20 My19	Jn1 Jy6-Jy27	My6-My16				My9-Jn29	
	Jn1-Jn12 Jn12-Jn24	Ap24 Jn8	My23			My18-Jn15	Jn5-Jn10
My20 My26-Jn1 Jn1-Jn25	Jn12-Jn23 Jn12-Jn24	My14-My24 My24-Jn2 Jn8-Jy6	My14 My13-Jy6 My31		My26-Au13	My13-Jn29	My29-Jn24
My26 Jn1	Jn17 Jn24	My15-My24 My4-My21 My18	Jn6 My31		My30	Jn15	Jn10-Jn13

			Waterton Lakes National Park	Milk River Area	Cardston Area	Crowsnest Pass Area	Cypress Hills Provincial Park
	Elevation		4200'	3200'	4400'	4200'	4100'
late Spring	*Amelanchier alnifolia* Saskatoon-berry	1973		Jn9		My19-My26	
		1974					
		1975			Jn9-Jn26	My29	Jn27
	Viola rugulosa Western Canada Violet	1973			Jn17	My12	Jn5-Jn12
		1974	Jn29		Jn21	My27	
		1975	Jy1	My18		Jn3	Jn27
	Disporum trachycarpum Fairy Bells	1973				My19	
		1974			Jn21	My27	My19
		1975	Jy1	My18		My29	Jn27
	Smilacina stellata Star-flowered Solomon's-seal	1973			Jn17	My19-My26	
		1974			Jn21	My27	
		1975	Jy1	My18-Jn9	Jn9	Jn3	
	Prunus pensylvanica Pin Cherry	1973					
		1974					
		1975	Jy1				
	Corydalis aurea Golden Corydalis	1973				My19	
		1974					
		1975				Jy27	
	Caltha palustris Marsh Marigold	1973					
		1974					
		1975					
	Calypso bulbosa Calpyso Orchid	1973				My19-Jn3	My29-Jn11
		1974					
		1975				Jn3	Jn27
	Clematis verticellaris var. *columbiana* Purple Clematis	1973					My27-Jn5
		1974	Jn29			My27-My29	
		1975	Jy1-Jy28			Jn3-Jy27	
	Prunus virginiana var. *melanocarpa* Choke Cherry	1973					
		1974					
		1975	Jy1	Jn9	Jn9-Jn26	My29	
	Cerastium arvense Field Chickweed	1973				My19	
		1974	Jn29		Jn2	My12-My27	My19
		1975	Jy1-Jy20	Jn12	Jn9-Jn26		Jn27
	Penstemon nitidus Smooth Blue Beard-tongue	1973			Jn17	My20	Jn5
		1974			Jn21	My11-My27	My19
		1975		Jn9-Jn12	Jn9	My28	
	Vicia sparsifolia Narrow-leaved Vetch	1973					
		1974					
		1975		Jn9	Jn9		
	Balsamorhiza sagittata Balsam Root	1973			Jn5	My12-My21	
		1974	Jn29		Jn21	My9-My27	
		1975	Jy1		My30-Jn9		
	Maianthemum canadense var. *interius* Wild Lily-of-the-valley	1973					
		1974					
		1975					
	Comandra pallida Pale Comandra	1973					
		1974	Jn29		Jn2	My27	
		1975	Jy19	Jn12	Jn26	Jy11	Jn27
	Viburnum edule Low Bush Cranberry	1973					
		1974					
		1975					

Lethbridge Area	Medicine Hat Area	Porcupine Hills Area	Turner Valley Area	Bow-Crow Forest Reserve Area	Calgary Area	Canmore Area	Drumheller Area
3100'	2200'	3500'	3900'	6000'	3500'	4200'	2300'
My10-My20 My10 My21-Jn17	My11-Jn2	My8-My27 Jn6	Jn9-Jn16 My25-Jn23 My31-Jn22	My31-Jn28	My7-Jy27 My11-Jn15 My24-Jy2	My27 Jn8-Jn16 My28-Jy5	My12-Jn3 My4-Jn15 My19-Jn18
		Jn1-Jn6	Jn9-Jn16 Jn1 Jn8-Jn22	Jn2-Jy9	My12-Jy27 My21-Jy13 My22-Jy13	My21-Jy11 Jn1-Jy19	My15-Jn3 My11-Jn15 Jn1-Jn23
		My8-My30 Jn1	Jn9 My25-Jn1 My31-Jn22	My29-Jy2	My7-Jy27 My21-My24 My25-Jn29	Jn16 My28-Jy5	My13-My21 My11
My20 My25	My13	My30-Jn17 Jn6	Jn9-Jn16 My25-Jn24 Jn7-Jn22	Jn9-Jy16	My14-Jn17 My11-Jn19 My24-Jy2	My21-My27 My21-Jn16 Jn1-Jy1	My15-Jn3 Jn16-Jn23
Jn17			Jn7	Jn9-Jn16 My25 Jn9-Jn12			My18 My28 Jn1
		Jn6	Jn9-Jn16 My26 Jn7-Jn22	My29-Au15	My13-Jn6 My19-My30 My22-Jy13	My21 My26 Jn16 My27-Jy8	My20-Jn3
Jn21-Jy2 Jy4-Jy11			Jn8 Jn8-Jn22	My29-Jn9	My21-Jn17	Jn8 My26 Jn3	
My20-Jn5		My10-Jn3 My30 Jn6	Jn9-Jn16 My25-Jy1 My31-Jn22	My29-Jy9	My13-Jy4 My12-Jn15 My22-Jy2	My25 My21-Jn16 My27-Jy13	My19 Jn15
My20 My25 Jn10-Jn17		Jn6		Jn16 Jn12	My27-Jn10 My15-Jn1 Jy4	Jn5 Jn16 Jn10-Jn29	My25-Jn3 My14-Jn15 Jn10-Jn18
Jn20-Jy2 Jy4-Jy11 Jn6-Jn17		My13 My27-Jy5 My23-Jy3	Jn9-Jn16 My25-Jy1 My31-Jn7	Jn8-Au29	My13-Jy4 My25-Jy13 Jn4-Jy13	My16-My21 My21-Jn16 My27-Se21	My12-My20 My12-Jn15 Jn12-Jn23
My20 My3-My10 My21-Jn17	My13 My11-Jn2	My8-My30 Jn5-Jy1	Jn9-Jn16 My25-Jn24 My31-Jn7	Jn28-Au31	My15-Jn10 My27-Jn19 My24-Jy4	My27 Jn8-Au4	My15-My21 My12-Jn15 My30-Jn18
Jn7	Jn2	Jn17 Jy1	Jn9-Jn16		My18-Jy4 My23-Jy14 Jn8-Jy13		Jn3 Oc26 My30-Jn23
Jn17		Jn2 Jn1					
Jn17					Jn17		
Jn5-Jn17	Jn2	My30-Jn6 My23-Jy3	My29-Jn16 My31-Jn8	My29-Jy9	My22-Jn10 My11-Jn24 My31-Jy2	Jn9-Jn16 My25-Jy19	My20 My14-My21 My30-Jy10
				Jn9-Jy2	Jn6	Jn16-Jn24	

			Banff National Park	Red Deer Area	Rocky Mountain House Area	Wainwright-Vermilion Area	Stettler Area
Elevation			4500'	2800'	4000'	2000'	2700'
late Spring	*Amelanchier alnifolia* Saskatoon-berry	1973		My18-My27			
		1974		My25-Jn14	My31-Jn20		My25
		1975		Jn6-Jy20		My31-Jn6	My31-Jn1
	Viola rugulosa Western Canada Violet	1973		My18-Jn4			
		1974	Jn24	My23-Au7	Jn6-Jy11		My26
		1975		My30-Jy22	Jn30-Jy6	My31-Au1	
	Disporum trachycarpum Fairy Bells	1973		My16-Jn4			
		1974		My26-Jn19	My29-Jn2		
		1975	My25	Jn7-Jn18	Jn30	My31	
	Smilacina stellata Star-flowered Solomon's-seal	1973		My27-Jn4			
		1974		Jn2-Jn18	Jn19-Jy24		Jn6
		1975	My25	Jn6-Jn18		Jn4-Jn14	Jn15
	Prunus pensylvanica Pin Cherry	1973		My27			
		1974		Jn2-Jn5			
		1975		Jn15-Jn18		My31-Jn4	My26
	Corydalis aurea Golden Corydalis	1973		My27-Jn2		My13-My23	
		1974		Jn18-Jn19	My25-Oc20		
		1975		Jn6-Jy26	Jn1	My19-Jy26	
	Caltha palustris Marsh Marigold	1973		My19-My20			
		1974		Jn23	My25-Jn14		
		1975	Jy20	My20-Jn18	Jn1		
	Calypso bulbosa Calypso Orchid	1973					
		1974	Jn4-Jn9		Jn1-Jy5		
		1975	My25				
	Clematis verticellaris var. *columbiana* Purple Clematis	1973		My25-Jn4			
		1974	Jn4-Jy21	My29-Jn2	Jn20		
		1975	Jy4-Jy21				
	Prunus virginiana var. *melanocarpa* Choke Cherry	1973		My27			
		1974		Jn2-Jn16	Jn12-Jn20		Jn14
		1975		Jn15-Jy20		Jn14	My26-Jn16
	Cerastium arvense Field Chickweed	1973		My27-Jn1			
		1974	Jn4	My26-Jy2	My30-Oc20	Jn22	My25
		1975		Jn8-Jy22	Jn30	Jn4-Jy6	My26-Jn22
	Penstemon nitidus Smooth Blue Beard-tongue	1973					
		1974		Jn2			
		1975		Jn18-Jy1			Jn14-Jn25
	Vicia sparsifolia Narrow-leaved Vetch	1973					
		1974		Jn19-Jy2			
		1975		Jn19-Jn25		Jn14-Jy14	Jn1-Jy5
	Balsamorhiza sagittata Balsam Root	1973					
		1974					
		1975					
	Maianthemum canadense var. *interius* Wild Lily-of-the-valley	1973		Jn3	Jn29	Jn17	
		1974		Jn2-Jy2	Jn30-Jy26		
		1975		Jn8-Jy6	Jn30		
	Comandra pallida Pale Comandra	1973					
		1974		My26-Jn13		Jn19	
		1975		Jn18-Jy6		Jn14-Jy6	Jn22
	Viburnum edule Low Bush Cranberry	1973		Jn4			
		1974	Jn22	Jn2-Jn23	Jn1-Jn24		
		1975		Jn7			

Camrose Area	Jasper National Park	Edmonton Area	Whitecourt Area	Athabaska Area	Cold Lake Area	Peace River Area	Fort McMurray Area
2400'	3500'	2200'	2200'	1900'	1800'	2200'	1000'
Jn1 Jn7	Jn1-Jn15	My16-My24 My20-Jy24 Jn1-Jn8	My26-Jn9 My31-Jn29			My13-Jn29	My29-Jn10
Jn25		My19-My23 My25-Jn9 My18-Jy6	My16-Jn23		My26-Au13	My18-Jy6	
My26 Jn1	Jn17 Jn12-Jn24	My13-My25 My25	My26-Jn3				My29
My27 My 0-Jn16 Jn7	Jn1 Jn24	My20-My27 My27-Jn19 Jn11-Jn22	Jn3-Jn9		My26	My23-Jn29	Jn3-Jn24
Jn7		My15-My24 My22-Jn2 Jn1-Jn8				My15	My29-Jn3
My13	Jn1-Jn21 Jn24	My15 My22-Jn17	Jn24 Jy1-Jy3			My10-Jn17	My29-Jn13
	My21-Jn1 Jn12	My17-My24 My18-Jn15 Jn1	My21 My13-Jn9 My31		My26		Jn3-Jn10
	Jn1-Jn15	Jn29	My22-Jn8 My31		My27		
Jn8	Jn1 Jn6-Jn7	My16-My24 My22-Jn9 Jn5-Jn8	Jn4				
My20	Jn23	My16-My30 My29-Jn10 Jn8-Jn11			My30	My13-Jn14	My29-Jn15
My20 Jn1 Jn4	Jn24					My13-Jn22	Jn15
Jn25	Jn24	Jy6					
	Jn1						
Jn12-Jn21 Jn7-Jn25	Jn6-Jn24	My18-Jn17 Jn15-Jn19 Jn11-Jy3	Jn4 Jn9			Jn14-Jy1	Jn5-Jn24
My27 Jn8 Jn25	Jn12-Jn24	My22 Jn11-Jn19				Jn14-Jy13	Jn5-Jy17
	Au2 Jn24	My22-My25 Jn5-Jn10 Jn1-Jn8	Jn7-Jn23 Jn29				Jn10

			Waterton Lakes National Park	Milk River Area	Cardston Area	Crowsnest Pass Area	Cypress Hills Provincial Park
Elevation			4200'	3200'	4400'	4200'	4100'
late Spring	*Lithospermum ruderale* Wooly Gromwell	1973			Jn5	My26	
		1974	Jn29		Jn21	My20-My27	
		1975	Jy28		Jn9-Jn26		Jn27
	Zizia aptera Heart-leaved Alexanders	1973			Jn5	My19	
		1974	Jn29		Jn21	Au9	
		1975			Jy20-Au12	Jn3	Jn27
	Anemone multifida Cut-leaved Anemone	1973			Jn17		
		1974	Jn29		Jn21	Jn22	
		1975	Jy1		Jn26-Jy20	Jn3-Jy12	Jn27
	Smilacina racemosa var. *amplexicaulis* False Solomon's-seal	1973	Jn17				
		1974				Jn23	
		1975	Jy1			Jn13	
	Mertensia paniculata Tall Lungwort	1973					
		1974				Jn22	
		1975					
	Elaeagnus commutata Wolf Willow	1973				My29	
		1974					
		1975		Jn9-Jn12	Jn17-Jn26	Jy11	
	Viola nephrophylla Bog Violet	1973				My9	
		1974					
		1975	Jy1			My29	
	Arnica cordifolia Heart-leaved Arnica	1973	Jn13-Jn17				Jn11
		1974	Jn29			Jn22	
		1975	Jy1-Jy28			Jn9-Jy27	
	Potentilla anserina Silverweed	1973					
		1974	Jn29		Jn21		
		1975		Jn9	Jn26		
	Lathyrus ochroleucus Yellow Pea Vine	1973			Jn17		
		1974	Jn29		Jn21	Jn22	
		1975	Jy20-Jy28		Jn26	Jy27	Jn27
	Allium textile Prairie Onion	1973		Jn9			
		1974			Jn21	Ap17-Jn22	
		1975			Jn9-Jn26		Jn27
early Summer	*Thalictrum venulosum* Veiny Meadow Rue	1973				My20	
		1974	Jn29				
		1975	Jy1			Jy27	Jn27
	Senecio canus Silvery Groundsel	1973					
		1974	Jn29			Jn22	
		1975	Jy1-Jy20		Jn26		
	Lonicera dioica var. *glaucescens* Twining Honeysuckle	1973					
		1974					
		1975					
	Sisyrinchium montanum Blue-eyed Grass	1973				My30	
		1974	Jn29		Jn21		
		1975	Jy20-Jy28		Jy20	Jy27	
	Anemone canadensis Canada Anemone	1973					
		1974	Jn29				
		1975				Jy27	
	Linum lewisii Wild Blue Flax	1973				My20-Jn2	
		1974			Jn21	Au9	
		1975	Jy19-Jy28		Jn26-Jy20	Jy11-Jy27	

Lethbridge Area	Medicine Hat Area	Porcupine Hills Area	Turner Valley Area	Bow-Crow Forest Reserve Area	Calgary Area	Canmore Area	Drumheller Area
3100'	2200'	3500'	3900'	6000'	3500'	4200'	2300'
My27 Jn17		 My27-Jn17 Jn6-Jy1	My29-Jn16 My25-Jn23 My31-Jn7	 My29-	My13-Jy7 My19-Jn20 Jn4-Jy10	My21-My27 Jn1-Jn16 Jn8-Jy22	My21 My26
		 My23-Jy12 Jn1-Jy18	Jn9-Jn16 My25-Jy24 Jn7-Jn22	 Jn9-Jy9	My23-Jy4 My22-Jy13 My25-Jy19	My27 My11-Jn16 Jn1-Jy22	My21 Jn16-Jn23
My20-Jn21 My28-Jy11 Jn6-Jn17		My19-Jy6 My8-Jy3 My23-Jy3	Jn9-Jn16 Jn1-Jy1 Jn7	 My31-Jy16	My13-Jy19 My8-Jy15 My25-Jy13	My21-My27 Jn3-Jn16 My28-Jy23	Jn3 Jn18
  Jn17		 My30 	Jn9-Jn16 Jn22	 Jn9-Jy9	Jn7 	 Jn16-Jy11 Jn8-Jn24	 My30-Jn18
		 Jy3	My21-Jy8 My20-Jy1 Jn8-Jn22	 Jn8-Jy9	Jn6-Jy27 Jn8-Jn15 Jn22-Jn29	Jn26 Jn1-Jn24 Jn24-Jy5	
My20-My30 My28 Jn17		 	Jn9-Jn16 	 Jn24-Jy14	My18-Jy4 Jn10-Jn19 Jn22-Jy4	 Jn16-Jn29 Jn24-Jy8	Jn3 Jn10-Jn23 Jn10-Jy1
  Jn2		 	 	 	My13-Jn17 Jn3-Jn8 	Jn19 Jn16-Jn24 Jn22-Jy22	 Jn16
		  	Jn9-Jy8 Jn24 Jn8-Jn22	 Jn10-Au31	Jn10 	 Jy11 Jn3-Se1	
My20 My28	Jn2	 My30	 	 Jn24	My29-Au18 My20-Jy26 My25-Jy13	 Jn16-Jn24 My25-Se7	Jn15 Jy30 Jn10-Jy25
  Jn17		Jy6 Jy1-Jy3	Jn9-Jn16 Jn23 Jn22	 Jn10-Jy16	Jn3-Jy4 Jn3-Jy13 Jn8-Jy13	 Jn16 Jn8-Au5	My27-Jn3 Jn16-Jn23
My20 My28 Jn5-Jn17	My19	 My30 Jn6-Au1	Jn9-Jn16 	 Jy9-Au29	My15-Jn20 My22-Jy12 My22-Jn7	 Jy1	My20-Jn3 Jn10-Jn23 My30-Jn23
		 Jn9-Jn24 Jy1	Jn9-Jn16 Jn1 Jn22	 Jn24-Jn28	My17-Jn10 My28-Jn30 My25-Jy13	 Jn1-Jn16 Jn8-Au4	Jn3 Jn16-Jn23
My20 My28 Jn6-Jy7		 My30-Jy12 Jy1-Jy3	Jn9-Jn16 	 Jy10-Au15	Jn4-Jn30 My22-Jy14 Jn7-Jy13	My21 Jn16-Jy11 Jn14-Au1	Jn14 Jn14-Jn16 Jn14-Jy10
  		 	 	 	Jn3-Jy27 Jn6-Jn30 Jn29-Jy13	Jn19 Jn16-Jn24 Jy1-Jy19	 Jn23
  		 Jy8 Jn17-Jy3 Jn6-Jy25	 Jn9-Jn16 	 Jn14-Jy6	My28-Jn18 Jn1-Jy14 Jn7-Jy13	 Jn16 Jn14-Jy22	 Jn18-Jn23
 Jn7 		 Jn6-Jy18	My29 	 	My12-Jy4 My20-Jy13 Jn7-Au3	 	My12-Jy4 Jn23-Jy10 Jn16-Jy1
My20-My30 My28-Jy28 Jn17-Jy7		Jy6 My30-Jy12 Jn6-Jy25	Jn9-Jn16 Jn24-Se22 	 Jn16-Au29	Jn2-Se29 Jn15-Au24 Jn20-Jy13	Jn25 Jn16-Jn24 Jn22-Au4	Jn6 Jn14 Jn14-Jy17

			Banff National Park	Red Deer Area	Rocky Mountain House Area	Wainwright-Vermilion Area	Stettler Area
Elevation			4500'	2800'	4000'	2000'	2700'
late Spring	*Lithospermum ruderale* Woolly Gromwell	1973					
		1974					
		1975					
	Zizia aptera Heart-leaved Alexanders	1973			Jn29		
		1974		Jn14-Jy2	Jn5-Jy11		Jn1-Jn25
		1975	My25	Jn18-Jn25	Jn1-Jy6	Jn19-Jy26	Jn15-Jn28
	Anemone multifida Cut-leaved Anemone	1973					
		1974	Jn4	Jn2-Jy20	Jn15-Jy25		
		1975		Jn18-Jy6	Jy6	Jn19-Jy6	
	Smilacina racemosa var. *amplexicaulis* False Solomon's-seal	1973					
		1974			Jn27		
		1975			Jn30		
	Mertensia paniculata Tall Lungwort	1973		My23-Jn20	Jn14		
		1974		Jn18-Jn23	Jn8-Au28		
		1975		Jn6-Jn25	Jn30-Jy7		
	Elaeagnus commutata Wolf Willow	1973		Jn18			
		1974		Jn18-Jy2	Jn20		Jn14
		1975		Jn15-Jn25	Jy6-Jy25	Jn14-Jn28	Jn8-Jn16
	Viola nephrophylla Bog Violet	1973		Jn8			
		1974	Jy21	My23-Jy2			
		1975		Jn18-Jy1		Jn19	
	Arnica cordifolia Heart-leaved Arnica	1973	Jn8				
		1974			Jn15-Se2		
		1975	Jy6-Se8		Jy6		
	Potentilla anserina Silverweed	1973		My27			
		1974		Jn18-Jy2	Jn12-Jn20	Jn23-Au1	Au23
		1975		Jn15-Jy25	Jy6	Jn14-Jy26	Jn25
	Lathyrus ochroleucus Yellow Pea Vine	1973					
		1974	Jn17	Jn18-Jy5	Jn20-Jy26		
		1975		Jn6-Jy15	Jn30-Jy7	Jn5-Jy6	Jn19-Jy5
	Allium textile Prairie Onion	1973		My27			
		1974		Jn2-Jy17		Jn20	Jy4
		1975		Jn19-Jy9		Jy8	Jn1-Jy14
early Summer	*Thalictrum venulosum* Veiny Meadow Rue	1973		Jn3			
		1974	Jy21	Jn18-Jy3	Jn19-Jy11		
		1975	Jy4-Jy21	Jn18-Jy20	Jy6	Jn6-Jy6	Jn22
	Senecio canus Silvery Groundsel	1973					
		1974			Jn30-Oc20		
		1975					
	Lonicera dioica var. *glaucescens* Twining Honeysuckle	1973					
		1974		Jn22-Jn24	Jy2		Jn24
		1975		Jn18-Jy28	Jy6-Jy7	Jn28	Jn25
	Sisyrinchium montanum Blue-eyed Grass	1973		Jy3		Jn17	
		1974		Jn18-Jy17	Jn30	Jn21-Jn23	Jn20-Jn25
		1975		Jn6-Jy28	Jn30	Jn14-Jy15	Jn8-Jy5
	Anemone canadensis Canada Anemone	1973		Jy20			
		1974		Jn2-Jn24		Jn24-Jy25	Jn17
		1975		Jn15-Jy15	Jn30-Jy6	Jn28-Jy26	Jn16-Jy14
	Linum lewisii Wild Blue Flax	1973					
		1974	Jn17	Jy7-Jy20			
		1975		Jy9-Jy20		Jy8-Jy14	

Camrose Area	Jasper National Park	Edmonton Area	Whitecourt Area	Athabaska Area	Cold Lake Area	Peace River Area	Fort McMurray Area
2400'	3500'	2200'	2200'	1900'	1800'	2200'	1000'
	Jn9						
Jn22	Jn24-Jy6	Jn7-Jy2 Jn24 Jn15-Jy6	Jn3		Jy11	Jn22-Jy9	
	Jn24		Jy9			Jn22-Jy6	Jn24
	Jy8	Jn2	Jn13 Jn7-Jy6 My31			Jn14	
Jn1	Jn12 Jn24	My24-Jn19 My30-Jn9 Jn1-Jy6	Jy14 My25-Jy12 Jn29		Jy10-Jy11	Jn7-Jn30	Jn3-Jn24
	Jn17 Jn12-Jn24	Jn10-Jn17 Jn15				My5-Jy1	
	Jn24	My22-Jn23 My26 Jn22					
	Jn24-Jy27	Jn4 Jn29	Jn7-Jn22			Jn15	Jn24
Jn22 Jn10-Jn25	Jn24	Jn9-Jn12 Jn19			Jy10-Jy19	Jn17-Au20	Jn24
Jn3 Jn6-Jn8 Jn14-Jn25	Jn17	My29 Jn10-Jn16 Jn4-Jy3	My21 Jn22-Jy6 Jn29-Jy22	Jy22	Jy9-Jy11	Jn5-Jy9	My29-Jn15
My27 My30-Jn22 Jn25						Jy22	
Jn18	Jn23 Jn30	My21 Jn10-Jn19 Jn15-Jy6	Jn23 Jn29			Jn14-Jy20	Jn15-Jn24
		Jy1				Jn28-Jy9	
Jn10 Jn15-Jy6 Jn18-Jn25	Jn17 Jn24	My24-Jn15 Jn15-Jn16 Jn11-Jy3	Jn4 Jn9-Jn29			Jn12	Jn24
Jn7 Jn10	Jn17 Jn24	Jn6-Jn17 Jn22-Jn30 Jn14-Jy6	My30 Jy10-Jy11 Jy22		Jy19	Jn7-Jn29	Jn13
Jn10 Jn13-Jn28 Jn10-Jy5	Jn17 Jy6	Jn13-Jn19 Jn10-Jn30 Jn11-Jy6	Jy22		Jy10-Jy11	Jn22-Jy6	
	Jn24					Jn14-Jn29	

			Waterton Lakes National Park	Milk River Area	Cardston Area	Crowsnest Pass Area	Cypress Hills Provincial Park
Elevation			4200'	3200'	4400'	4200'	4100'
early Summer	*Dryas drummondii* Yellow Dryas	1973					
		1974					
		1975					
	Vicia americana American Vetch	1973			Jn17	Jn12	
		1974	Jn29		Jn21	Jn22	
		1975	Jy20-Au21		Jn26-Au11	Jy11-Jy12	Jn27
	Lonicera involucrata Bracted Honeysuckle	1973					
		1974					
		1975	Jy19			Jy11	
	Ledum groenlandicum Labrador Tea	1973					
		1974					
		1975					
	Geranium viscosissimum Sticky Purple Geranium	1973			Jn5-Jn17	Jn3	
		1974	Jn29		Jn21	Jn22	
		1975	Jy19-Au17		Jy20-Au11	Jn6	Jn27
	Rubus strigosus Wild Red Raspberry	1973					
		1974			Jn21		
		1975				Jy27	
	Hedysarum mackenzii Mackenzie's Hedysarum	1973				Jn17	
		1974					
		1975	Jy20		Au11	Jy27	
	Cornus canadensis Bunchberry	1973					
		1974				My27	
		1975	Jy28			Jy27	
	Galium boreale Northern Bedstraw	1973				Jn20	
		1974	Jn29		Jn21	Jn22	
		1975	Jy19-Jy20		Jy20-Au12	Jy11	
	Achillea millefolium ssp. *lanulosa* Common Yarrow	1973			Jn17		
		1974	Jn29		Jn21	My27	
		1975	Jy1-Au21		Jy20-Au12	Jy11-Jy27	Jn27-Oc1
	Castilleja miniata Common Red Paintbrush	1973				Jn10	
		1974	Jn29		Jn21		
		1975	Jy1-Au21		Jn26-Au12	Jn15-Jy27	
	Zygadenus elegans White Camas	1973					
		1974	Jn29		Jn21	Jn22	
		1975	Jy19-Jy28		Jy20	Jn3-Jy27	Jn27
	Oxytropis splendens Showy Locoweed	1973					
		1974	Jn29		Jy22	Au4	
		1975	Jy19-Jy28			Jy11-Jy27	
	Pyrola asarifolia Common Pink Wintergreen	1973					
		1974					
		1975	Jy28			Jy27	
	Lilium philadelphicum var. *andinum* Western Wood Lily	1973				Jn19	
		1974	Jn29		Jy25	Jn22	
		1975	Jy20		Jy20		
	Hedysarum alpinum Alpine Hedysarum	1973					
		1974			Jn21		
		1975	Jy28		Jy20-Au12	Jy11-Jy27	
	Gaura coccinea Scarlet Butterfly-weed	1973					
		1974					
		1975					

Lethbridge Area	Medicine Hat Area	Porcupine Hills Area	Turner Valley Area	Bow-Crow Forest Reserve Area	Calgary Area	Canmore Area	Drumheller Area
3100'	2200'	3500'	3900'	6000'	3500'	4200'	2300'
			Jn9-Jn23 Jn15-Jy1 Au30	My29-Au15	Jn17 Jn11 My25	Jn4-Jn17 Jn2-Au17 Jn22-Jy13	
My20-My27 My28-Jy11 Jn6-Jy7	My23	My30-Jy12 Jy1-Jy18	Jn9-Jn16	Jn14-Au15	My31-Jy27 My22-Jy13 Jn7-Jy27	Jn24 Jn14-Au5	Jn23-Jy25
				Jn10-Jy16	Jn9-Jy4	Jn17-Jn26 Jn1-Jn24 Jn14-Jn24	
			Jn23	Jn28		Jn22-Jy22	
Jn17-Jy26		Jy6-Au9 My30-Jy12 Jn5-Au1	Jn9-Jn16 Jn23-Se21	Jy2-Au15	Jn2-Oc2 Jn1-Jy13 Jn4-Au23	Jy1-Au24	Jy27
				Jn12-Jy9	Jn5-Jy27 Jn17-Jy13 Jn29-Jy13	Jn14-Jy13	
Jn17				Jn9-Jy6	My13-Jn10 My21-Jy30 My24-Au3	My21 Jn2-Jy11 My27-Au1	My14-My20 Jn14-Jy1
			Jy1 Jn22	Jn23-Jy16	Jn17	Jy5-Jy13	
Jy4-Jy11 Jn17		Jy6 My30-Jy12 Jy1-Au1	Jy1 Au30	My31-Au31	Jn7-Jy27 Jn17-Jy30 Jn20-Jy27	Jn14-Jy11 Jn14-Se21	Jn18 Jy11-Jy23 Jn20-Jy27
My30-Jy2 Jn7-Jy11 Jn17-Jy26	Jy24	Jy6-Au9 Jn24-Jy12 Jy3-Au1	Jy1 Au30	Jn24-Se14	Jn4-Jy8 My22-Oc1 Jn22-Oc12	Jn21-Jn29 Jn24-Se7	Jn14 Jn16-Jy5 Jy1-Jy27
		Jy1	My30-Jy1 Jn14-Jn24 Jn7-Au30	Jn8-Se9	Jn10 Jn30-Jy13 Jy13	Jn4-Jn17 Jn9-Jy11 Jn3-Oc19	Jy9
Jn6-Jn17		My30-Jy12 Jy3-Jy18		Jn23-Au31	My28-Jy27 Jn5-Jy14 Jn14-Jy22	Jn16-Jy11 Jn22-Au5	Jy9 Jn16-Jy25
My28-Jy11		Jy3-Se22 Jy1-Jy18	Jn16 Jy14	Jn26-Au29	Jn11-Jy27 Jn18-Jy13 Jn29-Jy19	Jn8 Jn24-Jy22	Jn16-Jy5
				My30-Jn16 Jn23-Jn28	Jn3-Jy27 Jn30-Jy22 Jy10-Jy13	Jn29 Jn24-Jy23	Jy9
		Jy6 Jn24-Jy12	Jn16 Jn29	Jn24-Jy26	Jn23-Jy10 Jn14-Jy13 Jy10-Jy13	Jn25-Jn26 Jn16-Jn24 Jy1-Jy22	Jy5 Jy1-Jy9 Jy30-Jy25
		My30-Jy12 Jy1-Jy18		Jn14-Jy26	Jn9-Jn16 Jn11-Jy13 Jn15-Jy13	Jn21-Jn29 Jn22-Jy23	My30-Jy27 Jy9 Jn18-Jy25
Jn5-Jn21 Jn7-Jy11 Jn23-Jy26	Jn3	My30 Jy25			Jn8-Se5 Jn8-Au17 Jn22-Jy19		Jn10 Jn19 Jn25-Jy5

			Banff National Park	Red Deer Area	Rocky Mountain House Area	Wainwright-Vermilion Area	Stettler Area
Elevation			4500'	2800'	4000'	2000'	2700'
early Summer	*Dryas drummondii* Yellow Dryas	1973			Jn17		
		1974	Jy4-Jy21		Jy24		
		1975	Jy10		Jy7-Jy25		
	Vicia americana American Vetch	1973					
		1974	Oc26	Jn2-Jy2	Jn20-Se15	Jn22	
		1975		Jn18-Jy25	Jn30-Jy7	Jy6-Au1	Jn16-Jy5
	Lonicera involucrata Bracted Honeysuckle	1973					
		1974	Jn17	My31-Jy2	Jn14-Jy2		
		1975	Jy4-Jy15	Jn18-Jy1	Jy6-Jy7		
	Ledum groenlandicum Labrador Tea	1973					
		1974			Jn16-Jy25		
		1975	Jy4-Jy20		Jn30-Jy6		
	Geranium viscosissimum Sticky Purple Geranium	1973					
		1974		Jn22			
		1975		Jn18-Jy1			
	Rubus strigosus Wild Red Raspberry	1973					
		1974		Jn19-Jy17	Jn23-Au28		
		1975	Jy15	Jn18-Jy1	Jy7	Jy8	
	Hedysarum mackenzii Mackenzie's Hedysarum	1973					
		1974		Jn2	Jn16-Au30		
		1975	Jy15	Jn25	Jy7		
	Cornus canadensis Bunchberry	1973		Jn4	Jn29		
		1974	Jn18-Se22	Jn18-Jy17	Jn23-Se2	Jy1	Jn25
		1975	Jy8-Jy20	Jn18-Jy25	Jn30-Jy6	Jn14-Jy9	
	Galium boreale Northern Bedstraw	1973			Jn29		
		1974	Jn27	Jn19-Au20	Jn20-Se15	Jn21-Jn23	Jn22
		1975		Jn18-Jy28	Jn30-Jy25	Jn28-Au2	Jn8-Jy14
	Achillea millefolium ssp. *lanulosa* Common Yarrow	1973					
		1974	Se22-Oc26	Jn26-Au27	Jn20-Oc20		Jn22-Au22
		1975	Jy8-Oc19	Jn25-Jy28	Jn30-Jy6	Jn28-Se17	Jn19-Jy4
	Castilleja miniata Common Red Paintbrush	1973		Jy10			
		1974	Jn4-Se22	Jy17-Au27	Jn13-Au19		
		1975	Jy4-Se9	Jy25-Jy28	Jn30-Jy25	Jy9-Jy15	
	Zygadenus elegans White Camas	1973					
		1974	Jn27-Au24	Jy2-Jy17	Jy2-Se15	Jy24-Au8	
		1975	Jy15-Jy21	Jy15-Au10	Jy25	Jy12-Jy25	
	Oxytropis splendens Showy Locoweed	1973					
		1974	Jy21		Jn9-Au22		
		1975		Jy12	Jy7-Jy25		
	Pyrola asarifolia Common Pink Wintergreen	1973		Jy6	Jn29		
		1974	Jy4	Jn24-Jy11	Jy24-Au20	Jy7	
		1975	Jy8-Jy20	Jn18-Jy25	Jy6-Jy7	Jn28-Jy15	
	Lilium philadelphicum var. *andinum* Western Wood Lily	1973		Jn28	Jn29		
		1974	Jy1	Jy2-Jy17	Jn30-Jy24	Jy1-Jy23	Jn28
		1975		Jn25-Jy25	Jy6-Jy25	Jy6-Jy15	Jn28
	Hedysarum alpinum Alpine Hedysarum	1973					
		1974	Jy4		Jn25-Se2	Jy26	
		1975	Jy10	Jn18-Jy28	Jy6	Jy8-Au1	
	Gaura coccinea Scarlet Butterfly-weed	1973					
		1974					Jy6
		1975	Jy8	Jn25		Jy8-Jy12	Jy14

Camrose Area	Jasper National Park	Edmonton Area	Whitecourt Area	Athabaska Area	Cold Lake Area	Peace River Area	Fort McMurray Area
2400'	3500'	2200'	2200'	1900'	1800'	2200'	1000'
	Jn12-Jy6	Jn30-Jy13		Jy8-Jy9			
Jn11 Jn16-Jn25	Jn24	Jn6 Jn15-Jn16 Jn19-Jy19	Jn21-Au1 Jn29-Jy22	Jy22	Jy9-Jy19	Jn14-Jy18	Jn24
Jn1 Jn1-Jn25	Jn1-Jn23 Jn24	My19-My31 Jn9 Jn19-Jy3	My26-Jn23 Jy21			Jn15-Jy1	Jn13
	Jn15 Jn24	My29-Jn19 Jn9-Jn15 Jn14-Jn22	Jn15-Jy6		Jy11	Jn15	Jn3-Jn24
Jn21 Jn25-Jy5	Jn17 Jn24	Jn7-Jn19 Jn15-Jn19 Jn8-Jy3	Jy26		Jy11	Jn22-Jy6	Jn13-Jy17
	Jn17 Jn24-Jy27		Jn29			Jn15-Jy18	
Jn16 Jn14-Jn25	Jn17-Jn23 Jn24	My27-Jn19 Jn9-Jn19 Jn5-Jy6	Jn21-Au6 Jy21	Jy8-Jy22	Jy9-Jy11	Jn12-Jy4	My29-Jn24
Jn28 Jn18-Jn25	Jn24 Jn24-Jy4	Jn7-Jn16 Jn15-Jy13 Jy1-Jy19	Jn22-Au6 My31-Jy22	Jy22	Jy9-Jy19	Jn15-Au20	Jn24-Jy17
Jn22-Jy13 Jn25-Jy5	Jn17-Au6 Jn24-Jy27	Jn17-Jn26 Jn23-Jn28 Jy3-Au15	Jn29-Oc3	Jy22-Oc15	Jy9-Oc16	Jn15-Au20	Jn24-Se20
	Jn15-Au5 Jn24-Jy27	Jn17-Jn22 Jy7-Au3 Jn29-Au2	Jn3-Jn20 Jn22-Au1 Jy16-Jy28	Jy22	Jy29-Au13	Jn15-Au15	Jn13-Se20
	Jn17 Jy5-Jy27	Jy24					
	Jn30-Jy11	Jn23				Jn29-Jy29	
Jn16 Jn7-Jn25	Au5 Jy8	Jn17-Jn23 Jn29-Jy16 Jn22-Jy6	Jn18 Jy6-Jy25 Jy22	Jy8-Jy22	Jy9-Jy11	Jn22-Jy13	Jn24-Jy17
	Jn20 Jn24-Jy4	Jn22 Jy3-Jy7 Jy3-Jy6	Jn13-Jn19 Jy6-Jy26 Jy5-Jy23	Jy8-Jy9	Jy11-Jy19	Jn22-Jy15	Jn23-Jy17
Jy7	Jn24	Jy2 Au15			Jy11	Jn13-Jn18	

			Waterton Lakes National Park	Milk River Area	Cardston Area	Crowsnest Pass Area	Cypress Hills Provincial Park
Elevation			4200'	3200'	4400'	4200'	4100'
early Summer	*Eriogonum flavum* Yellow Umbrella-plant	1973					
		1974			Jy25	My19-Jy9	
		1975	Jy20-Jy28				
	Heracleum lanatum Cow Parsnip	1973					
		1974	Jn29			My27	
		1975	Jy19-Jy28		Jy20-Au11	Jy11-Jy27	
	Pedicularis groenlandica Elephant Head	1973			Jn17		
		1974			Jn21	Jn22	
		1975				Jy27	
	Linnaea borealis var. *americana* Twin-flower	1973					
		1974					
		1975	Jy28			Jy27	
	Castilleja septentrionalis Common Yellow Paintbrush	1973			Jn17		
		1974					
		1975	Jy20-Au21		Au11	Jy27	
	Symphoricarpos occidentale Western Snowberry	1973					
		1974					
		1975			Jn26-Au12		
	Gaillardia aristata Brown-eyed Susan	1973				Jn17	
		1974			Jn21	Jn29	
		1975	Jy19-Jy20		Jy20-Au12	Jy27	
	Campanula rotundifolia Bluebell	1973					
		1974	Jn29		Jy22	Au9	
		1975	Jy19-Au21		Jy20-Au12	Jy11-Jy27	Oc1
	Epilobium angustifolium Common Fireweed	1973					
		1974			Jn21	Jn22	
		1975	Jy19-Jy28		Jy20-Au11	Jy27	
	Agoseris glauca False Dandelion	1973			Jn5		
		1974	Jn29		Jn21	Jy29	
		1975	Jy19-Au21		Jy20-Au11	Jy27	
	Mentha arvensis var. *villosa* Wild Mint	1973					
		1974			Jy22	Jn22	
		1975	Jy28	My10	Au11	Jy27	
	Chrysopsis villosa Golden Aster	1973				Jn20	
		1974	Jn29		Jy22	Au9	
		1975	Jy20-Au21		Au11-Au12	Jy11-Jy12	
	Grindelia squarrosa Gumweed	1973					
		1974			Jy22	Au9	
		1975					
mid-Summer	*Parnassia palustris* Grass-of-Parnassus	1973					
		1974	Jn29				
		1975	Jy20-Jy28			Jy27	
	Penstemon confertus Yellow Beard-tongue	1973	Jn17-Jy22		Jn17		
		1974	Jn29		Jn21	Jy22	
		1975	Jy19-Jy20				
	Monarda fistulosa var. *menthaefolia* Wild Bergamot	1973					
		1974			Jy22	Jy29	
		1975	Jy19-Jy28		Au11-Au12	Jy27	Oc1
	Liatris punctata Blazing Star	1973					
		1974			Jy22	Au9	
		1975			Au11		

Lethbridge Area	Medicine Hat Area	Porcupine Hills Area	Turner Valley Area	Bow-Crow Forest Reserve Area	Calgary Area	Canmore Area	Drumheller Area
3100'	2200'	3500'	3900'	6000'	3500'	4200'	2300'
Jn5-Jy2 Jn7 Jn17-Jy26	Jy24	My30 Jy25		Jn26	Jn7-Jn21 Jn17-Jy15 Jn22-Jy22	Jn24-Au1	Jn3 Jn19-Jy9 Jy1-Jy17
		Jy25	Se9	Jy10-Au31	Jn18-Jy27 Jn29-Jy13 Jy13	Jn17 Jn29 Jy5-Au5	Jn29-Jy10 Jn18-Jy27
				Jn28-Au14	Jn16-Jy10 Jn9-Jy22	Jn17 Jn16-Jn24 Jn22-Jy22	
		Jy8		Jy26-Au31		Jy8-Jy22	
My10-My20 My10 Jn17		Jy6 Jn17-Jy12 Jy1-Jy3	Jn9-Jn16	Jn28-Au29	My31-Jy27 Jn18-Jy13 Jn24-Jy13	Jy12	Jn23-Jy9 Jn23-Jy25
Jy7-Jy26		Au9 Jy25			Jn6-Au14 Jn30-Au18 Jy12-Au23		Jy21 Jy1 Jy17-Jy27
Jn8-Jy2 Jy7-Jy26	Jy24	Jy6 My30-Jy12 Jy1-Au1	Jn9-Jn16	Jy10-Au15	Jn20-Se6 Jn18-Se3 Jn29-Se28	Jn15-Jn26 Jn24 Jn24-Se21	Jy6 Jn19-Se21 Jy1-Jy27
Jn17-Jy7		Jy9-Au9 My30-Jy19 Jy18-Au1	Se21 Au30-Se14	Jy9-Se9	Jy23-Se30 Jn12-Au24 Jy5-Se14	Jn29-Jy11 Jy5-Oc19	Jy6 Jn19-Jn30 Jy1-Jy27
		Jy8 Jy25	Au30	Jy6-Au31	Jy3-Se3 Jn26-Se2 Jy11-Jy27	Jy11-Jy27 Jn22-Se21	Jy6-Jy27
Jn21	My23 Jn2	Jy6 Jn27-Au9 Jy3-Jy18	Jn16 Jy1-Se21 Au30-Se14	Jy2-Au31	Jn17-Jy4 Jn23-Jy13 Jy10-Jy27	Jn13-Jn17 Jn16-Oc26 Jn22-Oc19	Jn3 Jn19 Jy1-Au22
		Au7	Au30		Jy4-Se5 Jy13-Jy14 Se12	Jy27 Au1-Au5	Jy20-Jy27
Jy7-Jy26	Jy24	Au9 Au8-Au9 Jy25-Au28	Jy19-Se22	Jy26-Au15	Jy11-Oc25 Jy7-Se22 Se7-Se28	Jy22-Se21	Jy5-Jy27
Jy22-Au3 Au18-Oc13		Au8	Se22		Jn27-Jy19 Jy8-Jy16		Au10 Au15 Jy25-Au20
				Jy26-Au15	Jy17-Au23 Au14	Au1-Au17 Jy19-Se7	Jy23
Jn17		Jy6 Jn17-Jy12 Jy3	Jn16 Au30	Au14-Au29	My18	Jn16-Jn23 Jy5-Jy19	
Jn29-Jy11 Jy22	Jy14	Jy8-Au9 Jy12-Jy30 Jy18-Au1	Au30		Jy3-Au8 Jy2-Au4 Jy11-Oc12	Jy27 Au5-Oc19	Jy15 Jy10 Jy17-Au12
Jy29 Au5 Au18		Au9 Au8-Au9 Au14-Au28			Jy21-Au8 Jy23		Au10 Jy30 Au6-Au15

			Banff National Park	Red Deer Area	Rocky Mountain House Area	Wainwright-Vermilion Area	Stettler Area
Elevation			4500'	2800'	4000'	2000'	2700'
early Summer	*Eriogonum flavum* Yellow Umbrella-plant	1973					
		1974					
		1975				Jy12	
	Heracleum lanatum Cow Parsnip	1973		Jy11			
		1974		Jn29-Jy4	Jn26-Se2		
		1975	Jy15-Jy21	Jn18-Jy28	Jn30	Jy7-Jy14	Jy9
	Pedicularis groenlandica Elephant Head	1973					
		1974	Jy20-Au24	Jy3	Jn30-Se15	Jy23	Jn20
		1975	Jy10-Jy20		Jy6-Jy25		
	Linnaea borealis var. *americana* Twin-flower	1973			Jn29		
		1974	Jy1-Se22	Jn18-Jy27	Jn27-Se2		
		1975	Jy15-Se13	Jn18-Jy25	Jy6-Jy7	Jy9-Jy14	
	Castilleja septentrionalis Common Yellow Paintbrush	1973					
		1974	Jy20		Jn21-Au20		
		1975	Jy10-Jy20				
	Symphoricarpos occidentale Western Snowberry	1973					
		1974		Jy5-Au23			
		1975		Jy12-Jy22		Jy8-Au2	Jy5
	Gaillardia aristata Brown-eyed Susan	1973		Jy10			
		1974	Jn17	Jn29-Jy20	Jn30-Jy2		Jy4
		1975	Jy8	Jn25-Au10	Jy6-Jy25	Jy6-Se25	Jy5-Jy14
	Campanula rotundifolia Bluebell	1973		Jy10-Jy13			
		1974	Se22-Oc26	Jy17-Au27	Jy18-Se15	Jy7	Jy1
		1975	Se8-Se13	Jn25-Au10	Jy7-Jy25	Jy6-Se23	Jy5-Jy14
	Epilobium angustifolium Common Fireweed	1973		Jy11			
		1974	Jy4-Se22	Jy2-Au27	Jn27-Se15		
		1975	Jy15-Jy21	Jy9-Au10	Jn30-Jy7	Jy6-Au1	Jy5-Jy14
	Agoseris glauca False Dandelion	1973					
		1974		Jy17-Au7	Jn27-Se15		
		1975		Jy5-Jy28		Jn28-Au1	
	Mentha arvensis var. *villosa* Wild Mint	1973		Jy20			
		1974		Jy14-Au27			Au22
		1975		Jy12-Jy28		Jy14-Jy26	
	Chrysopsis villosa Golden Aster	1973					
		1974		Jy27-Au20	Jy22	Jy7-Se14	Jy6
		1975		Jy15-Au10		Jy6-Au1	
	Grindelia squarrosa Gumweed	1973					
		1974		Jy17-Au27		Jy23-Au30	
		1975		Jy20-Jy28	Jy25	Jy13-Au2	Jy5-Au17
mid-Summer	*Parnassia palustris* Grass-of-Parnassus	1973					
		1974			Jy7-Au3	Jy23	
		1975		Jy22-Au10	Jy25	Jy25	
	Penstemon confertus Yellow Beard-tongue	1973					
		1974	Jy14		Au16-Au19		
		1975					
	Monarda fistulosa var. *menthaefolia* Wild Bergamot	1973		Jy12-Jy13			
		1974		Jy16-Au20		Jy20-Au2	
		1975		Jy9-Au10		Jy14-Au2	Jy5-Jy7
	Liatris punctata Blazing Star	1973					
		1974		Au14-Au19			
		1975		Jy28			

Camrose Area	Jasper National Park	Edmonton Area	Whitecourt Area	Athabaska Area	Cold Lake Area	Peace River Area	Fort McMurray Area
2400'	3500'	2200'	2200'	1900'	1800'	2200'	1000'
Jn28 Jn25-Jy5	Jn17-Au5 Jy6-Jy12	Jn23 Jn23-Jn28 Jy1-Jy28	Jn22-Au6 Jn29-Jy28	Jy22	Jy9-Jy19	Jn15-Jy22	
	Jn24	Jn23 Jn31					
Jn28 Jn25	Au5 Jn24	Jn17-Jn19 Jn15-Jn29 Jy1-Jy6	Jn22-Jy12	Jy8-Jy9	Jy10-Jy11	Jy2	Jn24
	Jn24-Jy27		Jy28				
		Jn26 Jy6-Jy24			Jy11	Jy1	
Jy7		Jy6 Jy5 Jy20	Jy28		Jy11		Se20
Jy7	Au2-Au5 Jy7	Jy8 Jy5-Jy18 Jy13-Au15	Jy1-Au6 Jy16-Jy22		Jy11-Oc4	Jy1-Au20	Se20-Oc8
Jy6 Jn21	Au2 Jy4-Jy27	Jn17-Jy1 Jn29-Jy17 Jy6-Au15	Jn29-Au6 Jn29-Jy28	Jy22	Jy9-Jy29	Jy4-Au20	Jy17
	Jy8	Jy7 Au2					Se20
Jy28		Jn18-Au7 Jy19-Au2	Jy22	Jy22	Jy19-Au13	Jy13-Au16	
			Jy29		Jy11		
Au14						Jy15	
	Jn24-Jy27	Jy13	Jy12-Jy29		Au13	Jy13-Au20	Jy17
		Jy13 Au15				Jy15	

Hanna, Hesketh, Hussar, Kirkpatrick, Little Fish Lake, Morin, Rockyford, Rosebud, Rosedale, Standard, Strathmore; (14) Banff National Park - Banff, Bourgeau Lake, Hector Lake, Lake Louise, Leman Lake; (15) Red Deer - Bentley, Bowden, Delburne, Dry Island Provincial Park, Elnora, Innisfail, Lacombe, Lousana, Morningside, Penhold, Pine Lake, Ponoka, Red Deer, Rimbey; (16) Rocky Mountain House - Brazeau Dam, Breton, Clearwater Forest Reserve, Crimson Lake, Drayton Valley, Kootenay Plains, Nordegg, Ricinus, Sundre, Water Valley; (17) Wainwright-Vermilion - Alliance, Amisk, Battle River Crossing, Big Knife Provincial Park, Birch Lake, Capt. Eyre Lake, Chester Lake, Clandonald, Consort, Coronation, Czar, Dilberry Lake Provincial Park, Edgerton, Gooseberry Lake, Hardisty, Horseshoe Lake, Islay, Kinsella, Lea Park, Marwayne, Myrnam, Sounding Lake, Two Hills, Wainwright, Vermilion, Viking; (18) Stettler - Botha, Big Valley, Buffalo Lake, Erskine, Fenn, Forestburg, Gadsby, Halkirk, Rumsey, Rochon Sands Provincial Park, Stettler; (19) Camrose - Bittern Lake, Camrose, Edberg, Miquelon Lake Provincial Park, Pigeon Lake, Ryley, Wetaskiwin; (20) Jasper National Park - Cadomin, Grande Cache, Hinton, Miette Hot Springs, Mountain Park, Parker Ridge; (21) Edmonton - Andrew, Beaumont, Beaverhill Lake, Calmar, Cooking Lake, Edmonton, Gibbons, Glenevis, Gunn, Lamont, Ministik Lake, Mundare, Onoway, Opal, Sherbrooke Lake, Spruce Grove, Stony Plain, Sunnybrook, Tofield, Wabamun, Winterburn; (22) Whitecourt - Barrhead, Chip Lake, Clyde, Dunstable, Edson, Fox Creek, George Lake, Lisburn, Little Smoky, Mayerthorpe, Peers, Pembina River Provincial Park, Rochester Valley, Sangudo, Swan Hills, Westlock, Whitecourt, Windfall; (23) Athabasca - Athabasca, Calling Lake, Slave Lake; (24) Cold Lake - Bellis, Bonnyville, Cold Lake, Elk Point, Heinsburg, Spedden, Whitney Lake; (25) Peace River - Bay Tree, Bear Canyon, Beaverlodge, Berwyn, Calais, Crooked Creek (Debolt), Eaglesham, Fairview, Falher, Gordondale, Grimshaw, Hines Creek, Jean Cote, Kleskun Hills, Manning, Peace River, Rycroft, Spirit River, Valleyview, Wanham, Watino; (26) Fort McMurray - Fort McMurray, Gregoire Lake Provincial Park, Johnson Lake, Peerless Lake.

The following individuals are to be commended for the success of this project: Heather Adamson, Desmond & Elizabeth Allen, Peter Allen, Blain & Leita Askew, C.B. Bailey, John & Brenda Baker, M.W. & D.L. Battrum, M. Bendickson, Margaret Berg, Myrtle Biggs, C.D. & Ann Bird, Debbie Bird, Lilian Bird, Joy Blair, John Boyle, Dorothy & Glynnis Broadbent, Ralph & Pauline Burnner, Heather Bryant, Betty Bulmer, Anna Cairns, Audrey & D. Calvert, William

Carlyle, Evangeline & J.W. Case, Ellen Christensen, Margaret Clarke, Pat Clayton, Joyce & Keith Cole, P. & R. Cooley, John Corbin, Mary Coughlin, Susan Crack, Brenda Craig, Barbara & R.M. Danielson, Polly Darnell, Cathy Dennis, Daphne Denton, Sandy Denton, D.A. & Joan Dew, B. & Marjorie Donaldson, Madelaine Dumais, Jo Ann Erickson, Dale Eslinger, J.C. Fahrner, Joy Finlay, Gerry Fish, Alison Fisher, B. Flint, Josephine Forbes, Mymma Fulton, Judy Gayford, Renate Geist, B.J. Godwin, L. Goulden, H. Goulet, Sheila Green, C. Greene, G.M. & Patricia Greenlee, J. Grieve, Elizabeth Grove, Elizabeth Hall, Dr. & Mrs. R. Hall, Beryl Hallworth, Marilyn Hamlin, Aileen Harmon, Helen Harris, Dorothy Hazlett, Joan Hewitt, L.V. Hills, P. Hills, Sonya Hoffman, June Hollinrake, Mrs. D. Hopkins, Grace & G. Horspool, J. Howard, J.D. Johnson, P. Jones, Ruth Jones, Edith Kathol, Barbara Kell, W.G. Kerr, J. Kinnaird, Andrew Klar, N.G. Kondla, Virginia Lang, D. Larson, Russell Lemieux, L. Lohr, Mary Lore, Eleanor MacAllister, Mary MacAllister, Hon. G. MacEwan, H.A. MacGregor, K. & Lilian MacLennan, Virginia Maitland, Judy Matkaluk, Diane & Mike McIvor, G. McNabb, A.H. Marsh, Marian Michalsky, Susan Michalsky, Susan Mitchell, Kathleen Morck, Marion Morrocks, Joyce & Bill Morrow, Mrs. A.J. Moschenross, Marg & Tom Oliver, Jane Oliver, Dianne Pachal, J.D. Parson, Elizabeth Peck, Liza Perehinee, Michelle Perry, H. Pinel, J.B. Posey, J.M. Powell, Marian Pugh, Ron Quaife, Marg Reine, Barbara Ries, Sherry Rinke, Carol Robinson, K.L. Russell, Ellen & Ron Sangster, Helen Schuler, Euretta Scoular, B.R. Shantz, Keith & Shirley Shaw, R.N. & Mary Smith, Marjorie Stuart, Jean & Frank Tabor, Carolyn Tapay, Fred & Helen Tarlton, Grace Turner, D. & Joan Wales, Margaret Walker, Marie Anne & D.J. White, Gerry Wilkie, J. Wolford, Barbara Zimmer.

Data available for the last five years for the first flowering dates of twenty key species in the Calgary Area indicate that 1975 was slightly (one day) later than average. In comparison, 1971 was nine days late, 1972 one day late, 1973 seven days early, and 1974 five days early.

The accompanying Table gives the cumulative Growing Degree-days (above 42°F) in 1973-1975 (June 1975 data not available) for a number of Alberta locations arranged according to Hopkin's Bioclimatic Law. Growing Degree-days are defined as the accumulated excess of the daily mean temperature above 42°F. The amount of growth of many plants roughly coincides with a given number of these Degree-days. It is evident that, as they should, the number of Degree-days decreases as one reads down the columns. Anomalies which appear are due to irregular weather patterns, such as Medicine Hat and Lethbridge.

Cumulative Growing Degree-days (above 42°F) for selected Alberta Stations, 1973-1975

Station	°Lat.	Elev.	Law* days	yr.	Jan. 31	Feb. 28	Mar. 31	Apr. 15	Apr. 30	May 15	May 31	June 15	June 30
Medicine Hat	50°03'	2200	0	73	0.5	1.5	22.0	43.0	61.0	205.5	482.0	748.0	1080.5
				74	0.0	0.0	0.5	34.5	176.0	284.5	406.0	671.0	1114.0
				75	0.0	0.0	0.0	0.0	37.5	191.0	335.0		
Lethbridge	49°42'	3100	8	73	3.0	10.5	26.5	49.5	73.5	192.0	416.0	638.0	950.0
				74	0.0	0.0	5.0	38.0	207.0	300.5	410.5	669.0	1069.0
				75	0.0	0.0	0.0	0.0	15.5	127.5	262.5		
Stettler	52°18'	2700	14	73	0.0	0.0	0.0	3.0	4.0	104.0	311.0	487.0	759.0
				74	0.0	0.0	0.0	0.0	42.0	85.0	172.0	379.0	708.0
				75	0.0	0.0	0.0	0.0	9.0	101.0	211.0		
Edmonton	53°33'	2200	14	73	0.0	0.0	0.0	23.5	34.0	173.0	434.0	660.5	961.5
				74	0.0	0.0	0.0	0.5	48.0	136.5	265.5	508.0	871.0
				75	0.0	0.0	0.0	0.0	31.5	164.0	327.0	568.0	821.5
Red Deer	52°16'	2800	15	73	0.0	0.0	0.0	10.0	19.5	112.0	323.0	498.0	750.5
				74	0.0	0.0	0.0	1.0	80.0	135.5	213.5	406.0	707.5
				75	0.0	0.0	0.0	0.0	16.5	107.0	205.5		
Fort McMurray	56°43'	1000	15	73	0.0	0.0	2.0	12.5	17.5	159.5	423.0	611.0	925.0
				74	0.0	0.0	0.0	10.0	55.0	119.0	231.0	423.5	725.5
				75	0.0	0.0	0.0	5.5	48.5	179.0	277.0		
Calgary	51°05'	3500	17	73	0.0	0.0	1.5	10.0	12.0	105.0	310.5	475.0	740.0
				74	0.0	0.0	0.0	9.5	69.5	123.0	188.0	389.5	716.0
				75	0.0	3.5	3.5	3.5	15.5	91.0	182.5		
Beaverlodge	55°12'	2400	23	73	0.0	0.0	0.0	6.0	17.0	139.5	298.5	439.0	658.5
				74	0.0	0.0	0.0	0.0	30.0	76.0	165.0	333.5	572.5
				75	0.0	0.0	0.0	2.5	29.0	140.5	235.5		
Banff	51°05'	4500	28	73	0.0	0.0	0.0	4.0	5.5	57.0	169.0	277.0	482.0
				74	0.0	0.0	0.0	1.0	23.5	52.5	94.0	234.0	522.5
				75	0.0	0.0	0.0	0.0	5.5	60.5	127.5		

* Hopkin's Bioclimatic Law suggests that the flowering of a given species should occur at the rate of 4 days for each degree of latitude and 400 feet of altitude, later northward, and upward in the spring and early summer. Thus the first flowering should occur at Medicine Hat and the other stations should be "x" days later, e.g. 17 days later at Calgary. Also, flowering should be 6 days earlier (14-8) at Lethbridge than at Edmonton.

which experienced a late blizzard with deep snow in 1975. Irregular weather of this sort causes similar anomalies in flowering dates. The Table shows why flowering progresses increasingly later at the given stations as one moves down the columns.

Practical agricultural information can come out of a phenology study such as this. Budd and Campbell (1959, Journal of Range Management 12: 128-132) suggest that at Swift Current the date of range readiness (i.e. the earliest best date when cattle can be turned out on a pasture) can be forecast by adding 50-55 days to the date of first flowering of Prairie Crocus for that year. Of course, an even better figure to work with would be a given cumulative Degree-day number but as this data is not currently available locally then flowering dates are the best alternative. Other dates that could be worked out would be the earliest dates to plant particular cereal or garden plant species. This would be better than using certain magic dates, such as May 24 for that of planting most garden species.

The data now available gives us a good idea of the time of occurrence of flowering of many of our native plants and enables us to see some of the yearly and seasonal variability that takes place. The dates should still be interpreted with caution, however, as they still all too often indicate when people were out rather than the true start or end of flowering for a given area. It should also be borne in mind that plants flower earlier on a south-facing slope than on a north-facing one due to differences in the amount of solar energy reaching the ground.

We are learning a lot and are now in the position where we can start making a few applications. Data from additional years is needed before we can do more. It is important that the project continue and it is earnestly hoped that more individuals will take part in 1976 and that even more data will be forthcoming. Please contact the writer at the Biology Department, University of Calgary, if you would like your name added to the phenology project mailing list.

This project was financed by the Federation and by the writer's National Research Council of Canada operating grant. Barbara Danielson and Ellen Sangster helped with sorting, filing and typing of the data.

ALBERTA CHRISTMAS COUNT, 1975

Compiled by Virginia Lang

Note: A delay in receiving one of the known counts (Red Deer) and the last minute receipt of a count from Lethbridge as we go to press necessitates postponing this article until the June issue to ensure complete coverage. Counts were received from Banff-Canmore, Bow Summit, Calgary, Edmonton, Lethbridge, Saskatoon Lake, Stettler, and Wildlife Reserve, Water Valley.

My aim is to have issues to press within one week of deadlines whenever possible. Thus, this delay in publishing this article was deemed preferable to delaying publishing of the A.N. - M.K.M., 20 February, 1976.

HIGHLIGHTS OF FALL, 1975, BIRD MIGRATION SOUTHERN ALBERTA

by Rudi Butot

The fall in southern Alberta was mild and sloughs and lakes did not freeze over until the middle of November. For that matter, except for a short cold spell in early January, much of the Bow River has stayed open throughout Calgary this winter.

A rare sighting of a Yellow-billed Loon was made by a number of observers from November 2 - 5 on Glenmore reservoir in Calgary. A few Common Loons also lingered there until November 17. The last White Pelicans were reported from Milo on September 19, while Double-crested Cormorants were still at Brooks in large numbers during the first week of September. The last Great Blue Heron lingered until October 3 at Beiseker, and 2 Black-crowned Night Herons had not yet left Namaka Lake on October 5.

Whistling Swans passed through in good numbers, almost 6000 were reported during October and early November, of which approximately 24% were immatures. Trumpeter Swan reports were also substantial: 52 individuals sighted, the last one of which was from Bottrel on October 30. Snow Geese were present in large numbers, with the last report of 9000 at Milo on November 3. One female Greater Scaup, a rare sighting, was reported from the Bottrel area on October 8, while the last Surf Scoter sighting was made at Milo on November 9.

A flock of 24 Whooping Cranes was reported from Cochrane on September 19! The description reads: "Large whitish birds with black primaries, long neck and long legs." From the same general area came reports of Sandhill Cranes also. Three on September 18th, 23 on the 19th, 8 on the 20th and 15 on the 22nd, while the largest reported sighting of 650 birds came from Dowling Lake on September 21st. A single Dunlin reported from Irricana on October 26th was the last one for 1975, while one Ruddy Turnstone was seen near Bottrel on August 16, 17, and 18 and one at Namaka Lake on September 6th. Stilt Sandpiper were few in numbers this year, with the last sighting of 2 near Nightingale on September 1st. Wilson's Phalarope numbers were extremely low this fall, possibly due to the dry summer conditions that prevailed in the Calgary area. The largest flock reported was of 10 birds only. For that matter the shorebird migration was not very spectacular this fall, with the exception of Pectoral Sandpipers which were more common than usual.

Several sightings of a Glaucous Gull were received, with the last report for the Calgary area on November 7th. The last gulls seen were 4 Ring-billed Gulls in Calgary on November 19th. A rare sighting of a Long-tailed Jaeger came in from the Kananaskis Lakes area on August 17th.

Flycatchers moved through the Calgary area during the last 2 weeks of August and the first two weeks of September. A Western Wood Peewee brought up the rear and left September 11th. The last Bank Swallow was reported on August 7th from Cochrane, 2 Tree Swallows at Millarville on September 6th were the last of that species, while Cliff Swallows were last reported on September 1st from Lyalta, followed by Barn Swallows from Irricana and Milo on September 21st. The last reported Long-billed Marsh Wren was sighted on September 6th near Namaka Lake.

Swainson's Thrush and Veery were last reported from Calgary and Cochrane respectively in the latter half of August, but a late lingering Hermit Thrush stayed near Bottrel until October 23rd. A few American Robins and Townsend's Solitaires have stayed over winter, while the last Mountain Bluebird was seen at Milo on October 14th. The vireos and warblers moved through mainly in September and October. The last reported warbler was an Orange-crowned at Turner Valley on November 10th, while a rare sighting of a male Black-throated Blue Warbler was made in Calgary on October 13th and 14th.

Common Grackle reports were more numerous this fall than usual, with the last reported sighting on November 30th in Calgary. A Purple Finch as well as an American Goldfinch were last reported in the second week of October, both in Calgary, while Pine Siskins stayed the winter. The last report of a LeConte's Sparrow came from Bottrel on September 19th, and a sighting of 5 Baird's Sparrows at Millarville on September 6th was the last one for 1975. White-crowned Sparrows were still present in fair numbers in Calgary by October 10th, while the last White-throat was reported from Calgary on October 16th. A rare report of a Golden-crowned Sparrow arrived from Bottrel for September 19th. Reports of Lapland Longspur flocks in the hundreds were received for the early part of October, while Snow Buntings were first reported in ones and twos from the middle of October on, with the large flocks arriving by the middle of November.

More detailed tabulations for the fall period can be found in the late fall, early winter issues of The Calgary Field Naturalist.

FAUNAL OBSERVATIONS FOR NORTH - CENTRAL ALBERTA: AUTUMN 1975

Birds .... by G.R.A. Ebel

Faithful documentation of animal sightings on the Alberta Animal Record Cards make these cards an important and valuable "tool." Compiling the faunal observations for a particular period is but one way in which this tool is utilized; since it brings together a season's observations of sightings and observer, and sight distribution within the province.

The quantity of information consistently submitted by many contributors is interesting and commendable. However many unseen circumstances and delays often prohibit the faunal observations in appearing in subsequent reports, much to the regret of some people. In order to rectify what I see as the problem - late reports, I have delegated the compilation of observation cards into four groups. In future issues Terry Thormin will review and report butterfly observations submitted; John Acorn will cover fish, reptiles, amphibians and insects other than butterflies; Don Meredith will cover mammals; and I will compile bird observations.

The compiled information will be submitted for publication to either the Edmonton Naturalist, Alberta Naturalist or American Birds. The manner in which the cards will be divided for submission to the prospective journals is as follows: All observations which fall into the Edmonton Area (See: Faunal Observations for the Edmonton Area: Autumn 1975. Edmonton Naturalist 4(2):39) will be published in the Edmonton Naturalist. Cards which have the sighting location and the "nearest town" outside of the defined Edmonton Area (but not on the boundary) will be included in the North-Central Region and reported in the Alberta Naturalist. This Region covers the area north of 52° latitude, except from the Edmonton Area. The combined reports will be submitted to American Birds for reports of the Northern Great Plains Region.

Alberta Animal Record Cards are deposited either with the Provincial Museum of Alberta, 12845 - 102 Avenue, Edmonton or with me at home, 8016 - 180 Street, or at work, c/o LGL Ltd., 10110 - 124 Street. Your information may also be phoned in at either 487-4812 (home) or 488-4832 (work). Information supplied on the cards will be published (optimistically) quarterly: Spring (March 1 to May 31), Summer (June 1 to August 31), Autumn (September 1 to November 30) and Winter (December 1 to February 28/29), all dates are inclusive. Unfortunately these periods and dates do not correspond with deadlines for submission of material to the AN. Consequently juggling of dates is in order, so card reports for a period will appear in the coming season. More to come on this point in later issues. (Editor's Note: Deadlines for AN will be revised shortly). Due date for any quarter is the first week of the following quarter. Card data received late, after the due week will be acknowledged with your name in subsequent reports. Your comments and ideas on what you'd like to see in future issues are welcome.

Please submit all of your observation cards. The information you have gathered is an important contribution to Alberta's natural heritage and a valuable donation to the understanding of the distribution and habits of many wild animals.

OVERHEARD (49)

Sexy Bands???

"Because nuthatches are relatively tame, the sex and color of the band could be easily seen in almost every sighting." - Bruce Buckingham, Inland Bird Banding News 4 7: 174.

(Submitted by M.K.M.)

BIRDS

Loons to Herons

Common Loons were observed at Jasper (27 Sept.) and near Nordegg (28 Sept. -AN). Red-necked Grebes were reported from Slave Lake (11, 12 Oct. -DW, LW). Western Grebes were seen by G C D G on 12 Sept. and by D W, L W, on 11 Oct. on the open waters of Lesser Slave Lake. A single adult Great Blue Heron was observed by D B, M L, in a parkland slough (approximately 6 miles west of Vegreville).

Waterfowl

Whistling Swans made their debut in the Area, west of Slave Lake on 11 Oct. (25-DW, LW). The same day 123 Whistlers were seen at Mitsue Lake (Slave Lake) and at Faust on 12 Oct. (DW, LW). Trumpeter Swans were reported near Sedgewick (13 Oct. -J Mc, G Mc) and near Grande Prairie (28 Oct. -J Mc). DW and LW counted 267 Canada Geese staging near Peace River on 12 Oct. Several hundred unidentified ducks were observed by WEB on 27 Oct., 2 to 5 miles east of Andrew. Five Canvasbacks (4 males, 1 female) were seen on Lesser Slave Lake 4 miles west of Slave Lake townsite by DW and LW on 11 Oct. It seemed that 11 and 12 Oct. were good days to see Bufflehead near Slave Lake and Faust (DW, LW).

Hawks

Two reports of Goshawks were submitted; one was seen over fields south of Greencourt (8 Nov. -G R A E) and the other at Drayton Valley (31 Nov. -R E G). On 9 Sept., a single Sharp-shinned Hawk was seen ½ mile east of the lower Kananaskis Lake (GG, MH). Single Red-tail Hawks were seen near Looma (5 Oct. -GG, PG) and Longview (11 Oct. -A.N.) and a Broad-winged Hawk sighting by JK comes near Fort Chipewyan on 1 Sept. October is Rough-legged Hawk migration; the first sighting of two such hawks was 2 miles N.E. of Botha 5 Oct. (GG, LG). Additional sightings came from Flatbush (DW, LW), Fawcett (DW, LW), Forestry Trunk Road (A.N.), Enilda (DW, LW) and as far south as Waterton (24 Oct. -A.N.). South bound Golden Eagles were reported from Botha (GG, PG) on 5 Oct. at Peace River, Longview, Hinton and Athabasca (14 Oct. -GG, MFH). First reports of Bald Eagles began on 14 Oct. (GMG, MFH) at Calling Lake.

A few miles to the southwest, GMG saw one adult on 17 Oct. near the east shore of Lesser Slave Lake. The last observation was on 6 Nov. near Midnapore (A.N.). Single Marsh Hawks were reported near Bashaw (5, 18 Oct. -GG, PG, JW). No Ospreys? On 8 Sept., 8 miles N.E. of Exshaw, 1 Prairie Falcon was observed by GG, MH. The same observers recorded a single Peregrine Falcon (19 Sept. at Vermilion Provincial Park).

Grouse to Coot

Two reports of Spruce Grouse came from Lower Kananaskis Lake area (10, 11 Sept. -GG,MH). Ruffed Grouse were observed at various points from Vegreville. (10 Oct. -WEB) to Edson (23 Nov. -REG). Eighteen Sharp-tailed Grouse were seen N.W. of Vegreville on 19 Oct. and a total of 10 Sandhill Cranes were reported from Vegreville (28 Sept. -FAB, DJ, AJ) and Peace River (12 Oct. -DW, LW). One report of 100+ American Coots were recorded near Longview (11 Oct. -A.N.). Are they becoming rare?

Gulls

One adult Herring and one juvenile Thayer's Gull were reported on 11, 12 of Oct. in the Lesser Slave Lake area. 26 juvenile and 42 adult Ring-billed Gulls (12 Oct.) were noted near Peace River. Bonaparte's Gulls were reported in the hundreds at Peace River, and 16 were observed on 12 Oct. at Grouard. All gull reports by DW, LW.

Doves to Owls

A single observation of a Mourning Dove was made on 11 Sept. near Orion (J Mc, G Mc). The only Snowy Owl sighting for the Autumn season was made by WEB on 10 Nov., 2 miles easy by Andrew on Highway #45. RB was fortunate to see one Hawk Owl (the only report) on 18 Oct. near Grassland. Six Burrowing Owls were observed (ANW, JHE) ½ mile north of Spondin from 12 - 16 Sept. Great Gray Owl report comes from just south of the Brazeau River (13 Oct. AN) and north west of Cynthia (22 Nov. -RC, CK).

Woodpeckers

A Pileated Woodpeaker (the first in years at Grande Prairie) was seen on 3 Oct., (W. MacA).

Another was observed (GG, MH) on the south shore of Calling Lake near Athabasca; and one at Greencourt on 3 Nov. (GRAE). Reports of Hairy and Downy Woodpeckers near Vegreville were submitted by FAB. Black-backed three-toed Woodpeckers were sighted near Lesser Slave Lake on 13 Sept. (GCDG) and 15 Oct. (GG, MH). A Northern Three-toed Woodpecker sighting was made on 10 Oct. near Edmonton (RB).

Corvids to Kinglets

Ten Gray Jays were seen feeding on refuse at the Slave Lake townsite garbage dump (11 Oct. - DW, LW). Two other reports came from Greencourt, and one near Cynthia (RC). Blue Jays were reported for each month of the Autumn season. Sightings come from Vegreville (WEB, BB, ML), Slave Lake townsite tip (DW, LW), and Greencourt (GRAE). A single report of 4 Black-billed Magpie came from near Slave Lake (11 Oct. - DW, LW). Common Raven reports were: Peer (23 Nov. - REG), Cynthia (4 Oct. - RC), and at the Slave Lake tip (11 Oct.).

The first, last, and only report of Common Crows for the season was 11 Oct. at Matsui Lake (DW, LW). Black-capped Chickadees were reported from Slave Lake and Greencourt. A Red-breasted Nuthatch was seen by FAB, 4½ miles N.W. of Vegreville 13 Oct. A Brown Creeper and three Dippers were seen at Exshaw in early Sept. (GG, MH). A Horse Wren and an American Robin were present on 4 Oct. near Vegreville (FAB). A single juvenile or adult female Varied Thrush was reported by GG and MH on 11 Sept. near Exshaw. A Mountain Bluebird, the only report for Autumn, was observed on 3 Oct. near Hinton (JMP). Near Botha GG reports observing a Golden-crowned Kinglet (4 Oct.).

Waxwings to House Sparrow

About 200 Bohemian Waxwings, the first report for the Region, is accredited to GG, MH who made the observations on 10 Sept. near Exshaw. Other sightings in late Oct. and early Nov. come from Vegreville (FAB) and Greencourt (GRAE). A small flock of Cedar Waxwings, the last observation of this species for the season, was made by FAB of Vegreville on 28 Sept. Northern Shrikes appeared on 12 Oct. (DW, LW) near Lesser Slave Lake, Botha (GG, PG, JW), and Vegreville (FAB), whereas the Loggerhead Shrike was only reported once, near Sundre (12 Oct. - AN).

A hugh flock of Starlings was witnessed on 12 Oct. (DW, LW) near Donnelly. One Northern Waterthrush was sighted on 6 Sept. near Rosevear Ferry (RC). The only House Sparrows reported was at Greencourt.

Icterids - Fringillids

One Western Meadowlark seen 8 Nov. (GRAE) near Mayerthorpe was obviously late departing from the region. Evening Grosbeaks were reported from Faucett (RC) and from Vegreville on 1 Nov. (WEB). Five male and 4 female Pine Grosbeaks, 25 Oct. (RC), were the first reported for the season; six were also reported from Greencourt. A flock of Common Redpolls, the first report for Autumn, appeared 28 Oct. (BB) and later, 8 Nov. Redpolls were seen near Greencourt (GR AE). A Dark-eyed Junco was reported at Vegreville (10 Oct. FAB). All Tree sparrows which migrate through the North-Central Region were missed except for one, sighted near Vermilion (17 Sept. - GG, MH). One Harris' Sparrow was also seen at the same location and on the same date; and three were reported near Elkwater on 29 Sept. (GG). The first sightings of Snow Buntings for the region were on 11 Oct. and 12 Oct. (DW, LW) near Slave Lake. WEB witnessed 1,000 birds at Vegreville on 28 Oct.

Contributions

A. Nimno (AN)
G.R.A. Ebel (GRAE)
D. Weseloh (DW)
L. Weseloh (LW)
G.C.D. Griffiths (GCDG)
P. Brimacombe (PB)
W.E. Brimacombe (WEB)
Family Brimacombe (FAB)
B. Brimacombe (BB)
M. Lewis (ML)
J. McBride (JMc)
G. McBride (GMc)
J. Kristensen (JK)
D. Jeffery (DJ)
A. Jeffery (AJ)
R. Bunns (RB)
A.N. Wiseley (ANW)
J.H. Eisehauer (JHE)
J. Williams (JW)
C. Kullman (CK)
W. MacAlister (W. MacA)
J.M. Powell (JMP)
G. Greenlee (GG)
M. Hennie (MH)
L. Greenlee (LG)
P. Greenlee (PG)
R. Cromie (RC)

MAMMALS

by J.H. Acorn

No reports came in from the Edmonton area. The following summary represents those records received from other areas of the province.

Good numbers of Richardson's Ground Squirrels were active on 22 Oct. near Vegreville (WBB), and a Varying Hare was seen in the same area on 10 Oct. The hare was still in its brown summer pelage. A Porcupine offered good opportunity for observation when it walked along the main road through Elkwater on 10 Oct. A Black Bear was sighted near Grande Prairie on 20 Oct. by Yvonne and Walter MacAlister. One Long-tailed Weasel, still quite brown, showed up near Vegreville on 20 Oct. (WBB), and a Short-tailed Weasel was seen near Greencourt (GE). Mink were reported only once, on 13 Oct. near Sedgewick (JGM). The same party sighted a Badger near Dorothy on 8 Sept. Coyotes were plentiful, with records from Edson, Enilda, High Prairie, Peace River and Vegreville. Good numbers of White-tailed Deer and Mule Deer were seen in the Cypress Hills in Sept. (JGM), and near Elkwater on 1 Oct. (GG, EG). Five reports representing 10 Moose came in from the Cypress Hills, Edson, Elkwater and Grande Prairie. Seven Elk were seen near Elkwater on 1 Oct., and Pronghorn were plentiful near Dorothy and Finnegan on 8 Sept. (JGM).

Contributors

W.E. (Ed), Betty, Bruce & Pat Brimacombe (WBB)
G. Rainer A. Ebel (GE)
R.E. Gehlert
Graeme M. Greenlee (GG)
Eugene Gryba (EG)
Yvonne and Walter MacAlister
Jack and Gwen McBride (JGM)
D.V. & L.M. Weseloh

RECENT PUBLICATIONS ON THE NATURAL HISTORY OF ALBERTA (15)

Compiled by Martin E. McNicholl

ACORN, J. 1975. Birds and Tape Recorders. Edmonton Naturalist 3(10): 8.

ALLEN, D. 1975. Great Divide Trail Meeting. Calgary Field Naturalist 7: 123-125.

ALLEN, D. 1975. Canoe Trip on the Bow River to Carseland - Sett. 27-28. Calgary Field Naturalist 7: 166-167.

ANON. 1975. Fall Warbler Migration Walk at Inglewood - 24 August 1975. Calgary Field Naturalist 7: 78.

ANON. 1975. Observational Notes. Calgary Field Naturalist 7: 145. (Calgary Record of Black-throated Blue Warbler).

ANON. 1975. Universitie's Prairie Falcon is Back! Calgary Field Naturalist 7: 165.

BEMBRIDGE, B. 1975. Report of the September 1st Canoe Trip on the Red Deer River. Edmonton Naturalist 3(8): 3-4.

BEMBRIDGE, B. 1975. Report of October Field Trip. Edmonton Naturalist 3(10): 5.

BIRD, C.D. 1975. Natural History Observations - Other Than Birds. Calgary Field Naturalist 7: 138-140.

BIRD, C.D. 1975. Natural History Observations - Other Than Birds. Calgary Field Naturalist 7: 159-160.

BIRD, C.D. 1975. Natural History Observations - Other Than Birds. Calgary Field Naturalist 7: 186-188.

BIRD, C.D., and E. SANGSTER. 1975. Natural History Observations - Other Than Birds. Calgary Field Naturalist 7: 97-112.

BRIMACOMBE, E. 1976. You Never Know What You Might See. Edmonton Naturalist 4: 5-6.

BRIMACOMBE, E., and B. BRIMACOMBE. 1976. Northern Shrike Observation. Edmonton Naturalist 4: 11-12.

BULL, A. 1975. A Grizzly Experience! Calgary Field Naturalist 7: 121.

BULMER, B. 1976. Birds ... Heard or Seen in McKinnon Ravine - November 9, 1975. Edmonton Naturalist 4: 6.

BURNS, R.D. 1975. Unusual Feeding Behaviour of a Black-capped Chickadee. Edmonton Naturalist 3(10): 6-7.

BUTOT, M., and R. BUTOT. 1975. Natural History Observations - Birds. Calgary Field Naturalist 7: 182-185.

BUTOT, M., and R. BUTOT. 1976. Natural History Observations - Birds. Calgary Field Naturalist 7: 205-208.

BUTOT, R. 1975. Dates of First Reports of Spring Migrant Birds in Calgary Area. Calgary Field Naturalist 7: 126-130.

BUTOT, R. 1975. Natural History Observations - Birds. Calgary Field Naturalist 7: 133-138.

BUTOT, R. 1975. Neck Banding Program for Swans and Snow Geese - A Report on Whistling Swan A939. Calgary Field Naturalist 7: 150-153.

BUTOT, R. 1975. Natural History Observations - Birds. Calgary Field Naturalist 7: 155-159.

BUTOT, R., and M. BUTOT. 1975. Natural History Observations - Birds. Calgary Field Naturalist 7: 90-96.

CADE, T.J. (Editor). 1975. Captive Breeding - the 1975 Season. The Peregrine Fund Newsletter No. 3. (Include R.W. Fyfe's research in Alberta).

CASE, E.S. 1976. Report on a White-flowered Fireweed. Calgary Field Naturalist 7: 201-203.

CHEADLE, B. 1975. For the Love of Hawks. Calgary Field Naturalist 7: 176-177.

CLANCY, R. 1975. Annotated Bibliography of Books Useful in the Identification of Alberta Wildflowers. Edmonton Naturalist 3(9): 8-9.

COFFEY, E. 1976. Field Trip to Mill Creek Ravine. Edmonton Naturalist 4: 3-4.

COULTON, R.L. 1975. Road Kill Frequencies. Blue Jay 33: 248-249.

CUTLER, M. 1975. Are We Alienating Too Much Recreational Land and Too Much of Our Best Agricultural Land? Canadian Geogr. Journ. 90(5): 18-33.

DANIELSON, B. 1975. Evening Walk at Fish Creek Prov. Park - August 6., 1975. Calgary Field Naturalist 7: 77.

DANIELSON, B. 1975. A Red Fox Den in Calgary. Calgary Field Naturalist 7: 80-82.

DANIELSON, B.J. 1975. Observations on Raptor Migration - As Reported by C.F.N.S. Members. Calgary Field Naturalist 7: 169-175.

DEKKER, D. 1975. Snowy Plover and Other Uncommon Shorebirds at Beaverhill. Edmonton Naturalist 3(8): 5.

DEKKER, D. 1975. Some Observations on Fall Migration of Geese at Beaverhill Lake: 1964-1975. Edmonton Naturalist 3(10): 9-11.

DEKKER, D. 1975. Fluctuations in the Occurrence and Nesting of Shorebirds, Gulls, Geese, Herons, Pelicans and Cormorants at Beaverhill Lake as a Possible Result of Recent High Water Levels. Edmonton Naturalist 3(10): 11-14.

DROUIN, J.A., and H.R. WONG. 1975. Biology, Damage and Chemical Control of the Poplar Borer (Saperda calcarata) in the Junction of the Root and Stem of Balsam Poplar in Western Canada. Canadian Journ. Forest Research 5: 433-439.

EBEL, G.R.A. 1976. Faunal Observations for the Edmonton Area: Autumn 1975. Edmonton Naturalist 4: 39-44.

FISHER, A. 1975. Bat DRINKS from the Bow River! Calgary Field Naturalist 7: 122.

FOX, R.C. 1975. Fossil Snakes From the Upper Milk River Formation (Upper Cretaceous), Alberta. Canadian Journ. Earth Sciences 12: 1557-1563.

GREEN, T. 1975. Trans-Canada Twinning Still an Issue. Park News 11 (1): 2-3.

GRIFFITHS, D. 1976. Winter Wasp Nest. Edmonton Naturalist 4: 11-12.

HALLWORTH, B. 1975. A Trip to Porcupine Valley on Nose Hill - October 11. Calgary Field Naturalist 7: 167-168.

LANGSTON, W., Jr. 1975. The Caratopsian Dinosaurs and Associated Lower Vertebrates From the St. Mary River Formation (Maestrichtion) at Scubby Butte, Southern Alberta. Canadian Journ. Earth Sciences 12: 1576-1608.

LEHMKUHL, D.M. 1975. Field Guide to Aquatic Insect Families. Blue Jay 33: 199-219.

LORE, M.S. 1976. Beaverdam Flats Field Trip - Sunday, December 7, 1975. Calgary Field Naturalist 7: 194.

LOWTHER, P.E. 1975. Georgraphical and Ecological Variation in the Family Icteridae. Wilson Bulletin 87: 481-495.

MINTY, J. 1975. Annual Bus Trip of June 1, 1975 - Porcupine Hills. Calgary Field Naturalist 7: 76-77.

MINTY, J. 1975. Lake MacGregor Field Trip - October 19. Calgary Field Naturalist 7: 148-149.

NICHOLLS, E.L. 1976. The Oldest Known North American Occurrence of the Pleiosauria (Reptilia Sauropterygia) from the Liassic (Lower Jurassic) Fernie Group, Alberta, Canada. Canadian Journ. Earth Sciences 13: 185-188.

NIMMO, A. 1976. The Caddisflies (Trichoptera). Edmonton Naturalist 4: 13-15.

OSBORNE, C. 1976. Summer Vigil at the Slough. Calgary Field Naturalist 7: 198-201.

PINEL, H. 1975. Birds Recorded at the Inglewood Bird Sanctuary During the Falls of 1972, 1973 and 1974. Calgary Field Naturalist 7: 83-87.

PRINGLE, W.L., C.R. ELLIOTT, and K.J. DEGENHARDT. 1975. The Effect of Photo-period and Temperature on Northern Canadian Ecotypes of Agropyron Trachucaulum var. Trachycaulum (slender wheatgrass). Canadian Journ. Botany 53: 18-24.

REINE, M. 1975. Plant Records for 1975. Edmonton Naturalist 3(9):5-8.

ROED, M.A. 1975. Cordilleran and Laurentide Multiple Glaciation, West Central Alberta, Canada. Canadian Journ. Earth Sciences 12: 1493-1515.

ROGERS, T.M. (Editor). 1975. Northern Rocky Mountain-Intermountain Region. The Nesting Season, June 1 - July 31, 1975. American Birds 29:1006-1010.

ROSKAM, F.N. 1976. Notes on Dinosaur Provincial Park. Calgary Field Naturalist 7: 197-198.

SADLER, J., W. PARTRIDGE, and S. PHILPOT. 1975. A Report of Beddington Creek Prepared by Year 6 Students of Dr. J.K. Mulloy Elementary School. Calgary Field Naturalist 7: 164-165.

SCHABER, W. 1975. Survey of Park Protection Available for Canadian Wild Rivers. Park News 11(1): 13-17.

SCHALKWYK, H.M.E. 1975. More on Mushrooms. Edmonton Naturalist 3(9): 30.

SERR, E. (Editor). 1975. Northern Great Plains. The Winter Season. December 1, 1975 - March 31, 1975. American Birds 29: 705-707.

SERR, E. (Editor). 1975. Northern Great Plains. The Spring Migration. April 1 - May 31, 1975. American Birds 29: 867-870.

SERR, E. (Editor). 1975. Northern Great Plains. The Nesting Season. June 1 - July 31, 1975. American Birds 29: 995-999.

SHACKLETON, D.M., L.V. HILLS, and D.A. HUTTON. 1975. Aspects of Variation in Cranial Characters of Plains Bison (Bison bison bison Linnaeus) from Elk Island National Park, Alberta. Journ. Mammalogy 56: 871-887.

SHERRINGTON, P. 1975. Annual Hawk Watch - October 5, 1976. Calgary Field Naturalist 7: 147-148.

SMITH, H.C. 1975. The Birds North of Lesser Slave Lake, Alberta. Blue Jay 33: 232-239.

SMITH, H.M. 1976. Comparison of Food Items Found in Pellets of Seven Species of Owls. Edmonton Naturalist 4: 36-38.

STACE-SMITH, R. 1975. The Misuse of Snowmobiles Against Wildlife in Canada. Nature Canada 4(4): 3-8.

STEAR, C.W. 1975. Stromatoporoid Assemblages, Ancient Wall Reef Complex (Devonian), Alberta. Canadian Journ. Earth Sciences 12: 1631-1667.

STORER, J.E. 1975. Pleistocene Prairie Dog in South-Central Alberta. Blue Jay 33: 247.

VITT, D.H., P. ACHUFF, and R.E. ANDRUS. 1975. The Vegetation and Chemical Properties of Patterned Ferns in the Swan Hills, North Central Alberta. Canadian Journ. Botany 53: 2776-2795.

WESELOH, D.V. 1975. Comments on a 1972 Glaucous Gull Sighting at Calgary. Calgary Field Naturalist 7: 88-90.

WESELOH, D.V. 1976. Migration and Occurrence of the Rough-legged Hawk in "The Edmonton Area", 1972-1975. Edmonton Naturalist 4: 15-18.

WESELOH, D.V., and L.M. WESELOH (sic) 1975. Mew Gull at Frontier Farms Landfill Site. Edmonton Naturalist 3(8): 6.

WESELOH, D.V., and L.M. WESELOH. 1976. Bald Eagle Feeding on Richardson's Ground Squirrel. Calgary Field Naturalist 7: 195-197.

WOLFORD, J. 1975. Fauna Observations. Edmonton Naturalist 3(8): 7-14 and 3(9): 10-11.

ZALASKY, H. 1975. Low-temperature-induced Cankers and Burls in Test Conifers and Hardwoods. Canadian Journ. Botany 53: 2526-2535.

NATURALISTS' BOOKSHELF (17)

The Butterflies of North America

reviewed by Norbert G. Kondla
P.O. Box 1284, Calgary, Alberta

Recently a new book on the butterflies of North America has become available. Actually, it is restricted to the butterflies of Canada and the United States. In any case, it has been described as " ... the biggest Rhopalocerous event in over 75 years ..." (News of the Lepidopterists' Society, No. 6, 1975).

Copies can be obtained from several sources: (1) Order through your local bookstore. The price is likely to be about $50.00; (2) Order directly from the publisher, Doubleday and Co. Ltd., Dept. ZP-510, Garden City, New York, 11530. Price, $39.95; or (3) Order from Entomological Reprint Specialists, P.O. Box 77224, Dockweiler Station, Los Angeles, California 90007. Price, $39.95.

Page size of the book is about 7" x 10". Including the covers, it is about 2" thick and is obviously not a field guide for your pocket. Included in the 2" bulk are 633 pages of text, index, etc., and 97 colour plates showing - I haven't counted them - 2,093 butterflies.

A 72-page introduction covers such matters as butterfly biology, zoogeography, scientific names, techniques for collecting and preserving specimens, and the kinds of data that should be gathered with specimens. The bulk of the text is appropriately taken up by accounts of species and subspecies. Also included are a glossary, bibliography, list of major butterfly collections, and an index.

The book is the result of efforts by 20 contributors, the coordinating editor (William H. Howe), and the publisher. It has apparently been "in press" for a number of years.

The "hottest" part of the book is the block of centrally-located colour plates. In my opinion they are truly excellent. The individual illustrations are paintings, not photographs and all significant undersides are shown. Facing each plate is the name and full data for each butterfly shown.

The plates have what some may consider to be three shortcomings: (1) no diagnostic arrows for key features; (2) no references to corresponding text pages, and (3) no common names. Personally, I do not find these to be significant. Lack of diagnostic arrows encourages one to develop a more critical eye. Also, those who use this book regularly should have no trouble finding the appropriate text page. Finally, I see nothing to be gained (except more words) by having two sets of names for the same animal when one will do.

The text material is not quite as consistent as one might hope. For example, wingspan (in mm.) is given for some insects but not for others, and flight periods are not consistently reported. Diagnostic features of subspecies are usually given and taxonomic matters often discussed. Information on food plants and early stages is presented where known or suspected. Range is given in a general fashion, for example, " ... from southern Alberta and British Columbia south to ...."

No book review would be complete without at least one example of nitpicking, so to discharge my duty in this regard I point out that on page 376 we see the interesting combination Western Yellow Pine (Pinus contorta). However, this is not as serious as botanical blunder as provided by other zoologists (**e.g.** Oring, Auk 90: 652 - ponderosa pine near Rocky Mountain House???)

Possibly the major feature of the book likely to attract critism is the number of changes in nomenclature. While some of the new combinations (e.g. Boloria toddi is now Boloria bellona) seem to be generally accepted, others may represent Howe's own viewpoint without general acceptance. Not being familiar with the literature on butterfly taxonomy or being a butterfly taxonomist, I cannot pronounce judgement on the acceptability of the changes that were made. Hopefully, specialists will make their views known. Since new information is always coming to light, one cannot fault Howe for failure to include decisions made after the book was written. For example, Alberta naturalists will not see Callophrys polios obscurus in this book.

Whatever the rightness or wrongness of the changes, readers should be forewarned of departures from the names given in standard references, such as Hooper's Butterflies of Saskatchewan, Klot's Field Guide to the Butterflies (now 25 years old), and How to Know the Butterflies by Ehrlich and Ehrlich. Some local examples, with the Howe name first and old names second, are: Coenonympha inornata = Coenonympha tullia, Nymphalis vau-album = Nymphalis j-album, Speyeria electa beani and S. e. helena = Speyeria atlantis beani and S. a. helena, Speyeria nevadensis calgariana = Speyeria callipe calgariana, Papilio oregonius dodi = Papilio machaon dodi.

So much for negative comments and nitpicking. I like the book very much. Until I saw this book I had all but given up hope of identifying local Speyerias. The colour plates should make most identifications a piece of cake. I am particularly pleased to see the extensive treatment of subspecies. Because of the extreme geographic variability shown by many species it is sometimes hopeless for the new lepidopterist to try identification from books that use illustrations of subspecies substantially unlike our local representatives.

Previoulsy Alberta naturalists have had easy access only to the three books by Hooper, Klots and the Ehrlich's mentioned above. Only Klots has some colour plates while the other have none (a few colour photos in Hooper excepted). Ehrlich and Ehrlich do not cover subspecies, with the associated identification problems arising from geographic variability. As well, Ehrlich and Ehrlich do not cover the skippers and the books by Hooper and Klots do not cover all skippers found in Alberta. Neither does Klots include the many western species and subspecies of Alberta. In comparing the value of these books to the value of Howe for Alberta naturalists, there is no contest. Howe is ahead by a mile and everyone who aspires to contribute to a knowledge of Alberta lepidoptera should have a copy of this book.

NATURALISTS' BOOKSHELF (18)

MANITOBA BIRD STUDIES: A bibliography of Manitoba ornithology by Martin K. McNicholl. Published by the Province of Manitoba, Department of Mines, Resources and Environmental Management, Box 9, 989 Century Street, Winnipeg, Manitoba. R3H 0W4. 146 pp.

Local and regional natural history often benefit greatly whenever ornithological conferences are held. The 93rd Stated Meeting of the American Ornithologists' Union (A.O.U.) at Winnipeg in August 1975 produced this same side-effect. Manitoba Bird Studies is only one of at least four publications (known to me) that had their completion date hastened or set by Winnipeg's heralding of the A.O.U. meeting. The others were: 1) The Blue-Jay Index for 1961-1969 (SNHS Special Publication No. 8), 2) The 120 plus page Birds of the Rosetown-Biggar District, Saskatchewan (SNHS Special Publication No. 9) and 3) The reprint edition of E.E. Thompson's (1891) The Birds of Manitoba (available from Premium Venture Ltd., Winnipeg).

Manitoba Bird Studies is a compilation of approximately 1200 references on Manitoba ornithology. The references include "unpublished government manuscripts, theses, technical and popular books and papers, and historical works known to contain bird references" as well as "a list of publications on persons who have contributed to ornithology in Manitoba ..."

In preparing this bibliography, Martin, as he is known to most of us, has done an admirable job and is to be commended. Hopefully his contribution will provide the initiative necessary to continue the bibliographic documentation of ornithology in other provinces.

Obviously missing from the reference list, though through no fault of the author, are the many varied reports from environmental consulting companies. I find it extremely unfortunate that these reports, which understandably belong to the "client" for whom they were prepared, are not often known or generally available to the public. I know for instance, in Alberta, that there are literally volumes and volumes of data on bird distribution, nesting, etc. that may remain hidden away on shelves for years, simply because the client, usually an energy exploiting company, has paid for them and is not obligated to disclose them.

I long await the day when the titles and contents of these reports are legally made available to all interested natural history organizations and individuals.

Regardless of the work remaining to be done, Manitoba Bird Studies, is a significant contribution to Canada's Ornithology and it brings to our attention a great wealth of data from many scattered sources.

D.V. (Chip) Weseloh
Provincial Museum of Alberta

PROVINCIAL MUSEUM NEWS FOR NATURALISTS (2)

by D.A.E. Spalding, Head Curator
Natural History Section

MUSEUM IN THE MOVIES

A movie is being made about the museum experience, with support from the Alberta Department of Education, National Museums of Canada and the National Film Board. Tentatively entitled "Flight of the Hawk" the story includes a road-killed hawk, and actors playing a teacher and class to put over some basic points about conservation and museums. Tentative screening will be on CBC TV in February, and the film should be available afterwards through the National Film Board.

NEW MUSEUM NOTES

Two new museum notes have just been printed, and will be available from the Museum bookshop in Edmonton. One is on the White-tailed Deer habitat group, set at Pine Lake near Red Deer, and the other is a survey of Alberta's ground squirrels. Both are illustrated in color.

The Museum Note Series follows the earlier series of Museum and Archives Notes, retitled after the separation of Museum and Archives Branches. Other natural history titles in the series include three other titles on habitat groups (No. 1 on the Pronghorn, No. 3 on preparation of groups and No. 6 on the Moose). Three on fossils include 11 and 13 on dinosaurs, and 12 on invertebrate fossils in the building stone. Numerous other titles are in various stages of planning and preparation. Prices are currently 15 cents for each title.

EXHIBITS

Features likely to appear in 1976 include demonstrations of a mobile planetarium (in February) "Journey into the Silent Land" showing photographs by early travellers and naturalists in the west (August - October), and "Why - Why Not" featuring the work of Canadian women scientists in spring. Next winter we are planning the owl exhibit, mentioned in the last 'News'.

MUSEUMS AND OUTDOOR AND ENVIRONMENTAL EDUCATION

Museum staff are becoming heavily involved in the theory and practice of outdoor and environmental education, as the educational community becomes more and more involved in this area. Head Curator David Spalding spoke to the Canadian Nature Federation conference in 1974 on natural areas in Alberta's five largest cities (the paper should be published soon in the proceedings of that conference). A follow-up paper on museum involvements in natural area programs was given to the Canadian Museums Association in May, which has been submitted to the CMA's Gazette for publication. Reports on Museum interests in this area were given in October to the FIRST NATIONAL OUTDOOR AND ENVIRONMENTAL EDUCATION CONFERENCE in Fort Qu'Appelle, and to the Alberta Science Teachers conference in Banff.

Curators are in increasing demand for teacher's workshops and conferences on such themes. Several staff are currently involved in workshops with teachers of the Edmonton Separate School Board. Curator of Botany, Julie Hrapko taught a session for central Alberta teachers at Camp Caroline in September, and staff have already been asked to participate in another workshop at Camp He Ho Ha in the spring. Recreation Directors are also getting in on the act; Curator of Mammals Hugh Smith recently spoke to a group of Recreation staff from Greater Edmonton at the new Nature Centre in Fort Edmonton Park.

A FORGOTTEN NATURALIST

Continuing PMA research into the history of natural history in Alberta is turning up interesting data. Sidney S.S. Stansell came to Alberta from Illinois in the early years of this century, was in the Edmonton area from 1906 to at least 1915, filed on several homesteads in the Stony Plain area, collected eggs and skins of birds, took good photographs (including the one of the Gray Jay nest reproduced in Bent), published articles in the Ottawa Naturalist, Auk, and Bird Lore, sent data to the U.S. Biological Survey, did an Edmonton

Christmas Bird Count in 1906, and helped form an Alberta Audubon Society in 1908. The last information is a photograph in 1924 taken by Stansell at Provost. Any additional information on Stansell would be of great interest.

FAN NEWS, REPORTS, PROJECTS

A Provincial Species Count Day: Birds, Mammals & Plants in Flower

by D.V. (Chip) Weseloh

It is a widely acknowledged fact that there are few social gatherings of naturalists and bird watchers which create and stimulate as much excitement as the winter Christmas Bird Count. Some Alberta counts have been going on for years and the post-Count get-togethers at private individuals' homes are as traditional as leg of lamb and mint sauce. At other Counts, it is traditional for participants to come from far and wide to assist with the tallying procedure. The atmosphere on Christmas Counts is always jovial and the element of surprise in not knowing what species (or participants) will show up is omnipresent.

The summer equivalent of the Christmas Bird Count, adapted to meet the interests of bird, mammal and plant-freaks alike, is known by several names: May Day Count, Species Count Day and Big Day Count. Though it is organized slightly differently than the Christmas Count and is not yet as firmly established as its Winter Cousin, the May Day Count has a similar objective: To see how many species of (in our case) birds, mammals or plants in flower, can be located in one day, thereby increasing one's awareness of and appreciation for these aspects of Alberta's natural history.

This year FAN is sponsoring a Provincial Species Count Day. It may be at a given location, held on Saturday 29 May or Sunday 30 May, 1976 and there will be two categories of entries:

1) birds and mammals, and 2) plants in flower.

The rules for Count Day are few, quite simple and, in general, those used by the American Birding Association (1975):

1) Teams are made up of two or more persons* travelling in one car or other conveyance, maintaining conversational speaking distance with each other during all periods of observation.

2) More than half of the team (2 out of 2, 2 out of 3, 3 out of 4, etc.) must see the bird, mammal or plant in flower or, in the case of birds and mammals, recognize the species' song or call in order to count it. Exchange of tips with other people at chance meetings, lunch breaks, etc., is permitted, but a team must not utilize elaborate phone-in-setups or team up or travel together with persons in another car (except briefly).

3) The count period is for one 24 hour period. There are no geographical limitations other than within Alberta.

4) Count all recognized species. Include established exotics but no lone escapees. Count Rock Doves if reasonably feral, but not Mute Swans (unless truly feral) or semi-domestic ducks, etc.; use common sense. Dead or trapped individuals, hybrids and subspecies must not be counted, but should be mentioned in your report. Unidentified birds, mammals or plants in flower which can be unmistakeably recognized but cannot be identified, specifically ("peeps", "accipiter", ground squirrel, "Carex sedge", etc.) may be counted if no others in their families are counted.

5) In the case of birds, use the Alberta Check-List of Birds (available free of charge from the Provincial Museum and Archives, 12845 - 102 Avenue, Edmonton), incorporate recent A.O.U. changes.

6) Record numbers of observations of all birds, mammals and plants in flower at least up to 25. Note locations of observations, as well. Hours and miles covered should be included.

The history of the May Day Count in Alberta is relatively easy to trace. The first one, under the name of Species Count Day, was held at Calgary on 4 June 1972, and was limited to the observation of bird species only. It was rather poorly attended as there were only 6 participants but the winning team managed a fairly respectable 103 species and a total of 116 different species seen altogether (Lang, 1972).

* - Those who have participated in previous Count Days in Alberta stronly suggest that two persons is the ideal number of members per team.

In 1973 (10 June) there were again only six participants but the winning team amassed an impressive 110 species and all teams combined produced 125 different bird species (Lang, 1973). In 1974 (26 May) an attempt was made to organize a province-wide Count Day (Goulden, 1974). This failed miserably because of lack of interest, although one team was fielded in Calgary (Anon., 1974) and three teams in Lethbridge (H. Schuler, pers. comm.). In late May of 1975, Lethbridge held its second Count Day but bad weather forced its cancellation (H. Schuler, pers. comm.). Banff held a Count Day on 25 May, 1975, and recorded 56 bird species and 28 plants in flower (G. Holroyd, pers. comm.).

With such a spotty history you may wonder why we are making an effort to revive an outing that appears to have such a low interest. The fact of the matter is that FAN and myself both have faith in Alberta Naturalists!!! We feel that given the proper guidance (not to belittle any of the efforts of those organizers who have gone on before us) and widespread advertisement, a May Day Count will catch on and will be as enjoyable and make as meaningful a contribution to Alberta Ornithology as the Christmas Bird Count. So, if you do not succeed at first ...!

In hopes of making the 1976 May Day Count a success, we have arranged for regional co-ordinators to assist in organizing the counts. Hopefully, this means we will have at least as many team participating as there are regional co-ordinators! The regional co-ordinators are as follows:

Region	Co-ordinator	Address	Phone
Lethbridge	Helen Schuler	2630 - 22 Ave. Lethbridge	327-1830
Calgary - High River	Gregg Wagner	Site 2 - Box 2 R.R. #3, High River	652-7134
Banff	Geoff Holroyd	Box 1343 Banff	762-2829
Red Deer	Eldon Neufeld	5810 - 59A Street	343-1542
Edmonton	Richard Palindat	8511 - 43 Ave.	462-3357
Stettler	Virginia Maitland	Box 1888, Stettler	
Province-at-large	Chip Weseloh	Provincial Museum Edmonton	452-2150

Please take the time to notify your regional co-ordinator of your teams intention to participate in the count and, more importantly, forward to him, by 10 June, the results of your team's counting efforts. If you are not conveniently located to any regional co-ordinator, please feel free to contact me at the Provincial Museum. A report of this hopefully first (successful) Provincial Species Count Day will appear in the September issue of Alberta Naturalist.

Good luck on 30 May 1976 and let's have 20 or more teams counting throughout the province.

Literature Cited

American Birding Association. 1975. 1975 Big Day Rules. Birding 7(1): 39-40.

Anon. 1974. Species Count Day. Calgary Field Naturalist 6(1): 4.

Goulden, L.L. 1974. May Day Count. Alberta Naturalist 4(1): 30.

Lang, B. 1972. Report of the First Annual Species Count Day. Calgary Field Naturalist 4(2): 24-25.

Lang, B. 1973. Report of the Second Annual Species Count Day. Calgary Field Naturalist 5(2): 56-57.

UPCOMING FAN FIELD MEETINGS AND ACTIVITIES

by John M. Powell

SPRING MEETING

The spring FAN meeting will be held in the Edmonton area, May 22-24. Headquarters for the meeting will be the new City of Edmonton Nature Centre next door to Fort Edmonton Park on the south side of the North Saskatchewan River by the Quesnel Bridge and Whitemud Creek (see location map following page 53).

Saturday, May 22	-	9:30-10:00 AM	- Registration at Nature Centre for field trip.
	-	10:00 AM	- Field trip departs for Black Spruce Bog. Lunch (your own) at the Botanic Gardens of the University of Alberta, just south of Devon.

		Tour of Gardens - you will be surprised what is flowering at this time of year. See the birds, too. Return to Nature Centre by 5:00 p.m.
-	10:00 until? -	Directors' meeting at Nature Centre; bring own lunch.
-	12:00 noon-1:30PM	Registration at Nature Centre.
-	1:30 - 5:00 PM -	Field trip and tour of Fort Edmonton Park and the trails around the general area of the Nature Centre.
-	5:30 - 7:00 PM -	Wiener roast (no-host) at Nature Centre.
-	7:30 PM -	Evening at Nature Centre.
-	8:00 PM -	Guest speaker: Dr. Joe Nelson, co-author of "Fishes of Alberta." "The fishes of the sink hole area of Wood Buffalo National Park in relationship to the past glacial history of Alberta."
-	9:00 PM -	Coffee, cookies, etc. hosted by Edmonton Bird Club.
Sunday, May 23 -	6:00 - 10:00 AM	Bring your own cups and plates to a Pancake Breakfast at Hugh Campbell's, south of Hastings Lake off Highway 14 (see location map).* During this time there will be birding, a mist net demonstration, and a slough study on the Campbell property.
-	10:00 AM -	Leave Hugh's for a field trip to Beaverhill Lake, led by Bob Turner. Bring your own lunch.

* Following page 53

Late arrivals join the field trip at Charley's Place, Tofield (a Gulf station) at 10:15 a.m.

You are on your own for dinner or supper.

- 7:30 PM - Evening at Nature Centre.
- 8:00 PM - Guest speaker, Jim Butler. "Flora and Fauna of South Florida's Big Cypress Swamp."
- 9:00 PM - Coffee, cookies, etc. Hosted by Edmonton Natural History Club.

Monday, May 24 - 6:00 - 8:00 AM - Early morning bird walk. Start at Rainbow Valley Campground by Whitemud Creek on 45th Ave. (see Nature Centre location map).

- 9:30 AM - Bluebird Trail trip east of Sherwood Park. Start from Rainbow Valley Campground or Nature Centre.
- Noon - Elk Island National Park for lunch (bring your own). Possibility of seeing both species of Bison.

N.B. - Parties for distant parts of the province may leave the group from the Bluebird Trail at any time.

Nature Artists of Alberta Show - "A Brush With Nature"

A showing of paintings and other media art forms of "Nature" will be open for viewing in the Nature Centre on Saturday, May 22 from noon to 10:00 p.m. Artists wishing to display some of their paintings or other art forms (plant designs, wood carvings, etc.) MUST OBTAIN AN APPLICATION FORM from FAN, Box 1472, Edmonton, any member club, or the Nature Centre, and submit their application forms by April 30th.

All juniors, 15 years old and under, are especially invited to submit examples.

Camping Facilities

Persons from outside Edmonton wishing to camp while attending the FAN Spring Meeting should stay at Rainbow Valley Campgrounds, 13204 - 45 Avenue (see Nature Centre location map). No trailers are allowed at Rainbow Valley. If you have a trailer, try Edmonton Tourist Trailer Park, 10010 - 56 Avenue or Klondike Trailer Park, south of city off Highway #2.

Summer Meeting

July 17-18. Keep these dates free for a Field Trip Meeting in Bigknife Provincial Park area, on the Battle River, northeast of Stettler. A map and other details will appear in the June AN.

Fall Meeting

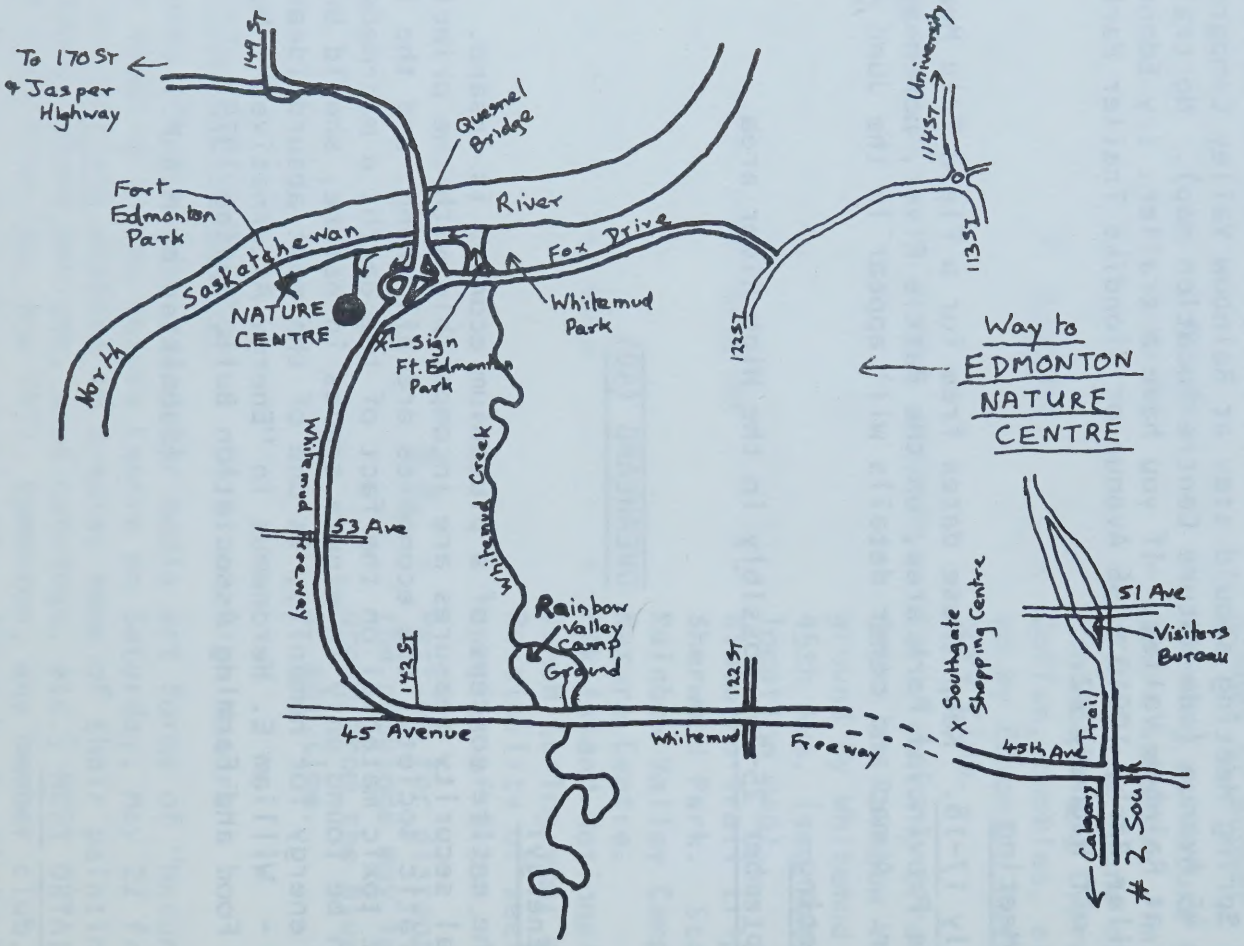
September 25-26, possibly in the High River area.

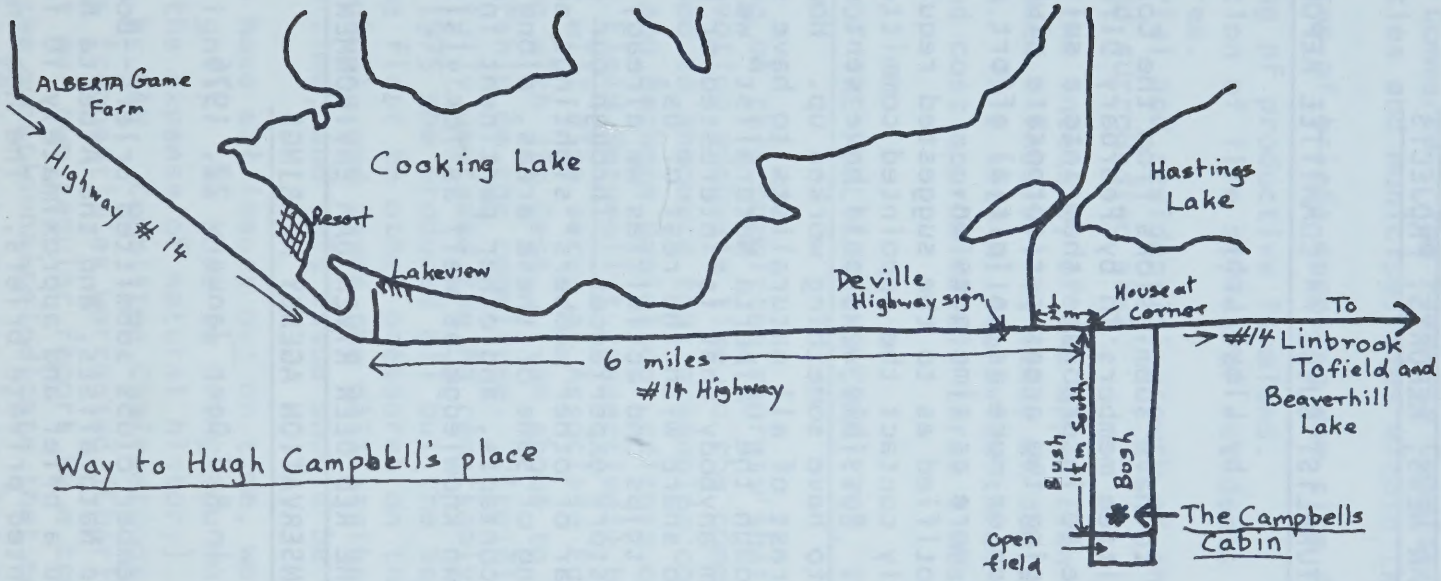
OVERHEARD (50)

Atomic Energy?

"The entire concept of a plutonium economy is insane. The essential security measures are incompatible with the principles of a democratic society, the economics are all wrong, and the idea that the most toxic material on the fact of the earth, a man-made material that can be found only in minute traces in nature, should be used to provide energy for humanity, is one of the most absurd ideas of all time." - William E. Heronemus in "Energy Alternatives", New England Natural Food and Farming Association Bull., Spring 1975.

(Submitted by M.K.M.)


To 170 St & Jasper Highway
149 St
Quesnel Bridge
River
Fort Edmonton Park
Saskatchewan
NATURE CENTRE
Fox Drive
Whitemud Park
Sign Ft. Edmonton Park
North
Whitemud Freeway
53 Ave
Whitemud Creek
Rainbow Valley Camp Ground
143 St
122 St
45 Avenue
Whitemud Freeway
122 St
113 St
114 St
University
Way to EDMONTON NATURE CENTRE
Southgate Shopping Centre
51 Ave
Visitors Bureau
45th Ave
Trail
Calgary
2 South



Way to Hugh Campbell's place

FAN NEWS, REPORTS, PROJECTS

ALBERTA NATURALIST GUIDE ** COMMITTEE REPORT

by Lloyd Lohr

It was our desire to have submissions from the Corporate member clubs through the committee members in by February Directors' meeting. That would give us time to incorporate them into a suitable guide book by spring. Averaging two areas per corporate club to start with; this would give fourteen or more as an initial effort and it would be a simple matter to add more as time goes on.

Clubs have been notified as to the suggested requirements so directors could possibly contact the appointed committee members responsible in their club. Possibly we should have sent out a reminder recently to each club to have something worked up. However, I feel that it is in the interest of all naturalists to have something like this going. Maybe through the "Alberta Naturalist" we could ask for member submissions from anybody that is interested or has a favorite spot they would like to share with the rest of us.

Through our field trips and activities we already have taken in a wealth of natural history experiences. Through our publications and news letters we hear of other members' sightings and discoveries. Let us get an accounting of some of these areas, along with directions, accommodations, local contacts, and other pertinent information into a guide book for our own knowledge as well as for visiting Naturalists.

REPORT OF THE RED DEER RIVER DAM ENVIRONMENTAL CONSERVATION AGENCY HEARINGS

Held in Red Deer January 27, 1976

Three corporate member clubs submitted briefs--Bow Valley Naturalists, Buffalo Lake Naturalists, and the Alberta Natural History Society. FAN submitted a brief and approximately 10 individual members of the ANHS presented private briefs. The hearing lasted three days, there were three briefs in favour of the dam, one from the Red Deer Regional Planning Commission, the City of Red Deer and the Red

Deer Chamber of Commerce. The Planning Commission Brief was endorsed by all the counties and municipalities within the Red Deer River Basin area.

Main concerns of briefs opposing dam site #6 were:

1. Flooding pf productive farmland.
2. Disruption of life styles of residents of proposed dam site area.
3. Industrial and residential growth of the City of Red Deer and surrounding area.

Because of the intensity of the opposition to dam site #6, the ECA has recommended a feasibility study of dam site #11, east of the Yaha Tinda Ranch. This site will provide three times the volume of water storage and cost approximately three times that of dam site #6.

REPORT OF THE PUBLICATIONS COMMITTEE, FEBRUARY 1976

The Chairman of this committee regrets that other duties have kept him from devoting adequate time to the committee to date. However, I am pleased to announce that a genuine committee now exists, as Chip Weseloh and Barbara Danielson, editors of the Edmonton Naturalist and Calgary Field Naturalist respectively have agreed to join the committee. They will also serve as Associate Editors of the Alberta Naturalist, along with Jim Case. I am about to write all over clubs concerning membership on the committee. Virginia Lang, retiring editor, has successfully upgraded the AN remarkably during her term in office. During 1975 she produced all but the September issue, which appeared late due first to other pressures on the time of Acting Editor, Martin McNicholl, and later the mail strike. The December issue was virtually on time, and this issue should be in your hands in March as on schedule.

In order to have all issues out on time, we shall probably revise the deadlines slightly. We hope to bring you more conservation material (but NOT at the expense of natural history), and print all resolutions and briefs by FAN. Committee Chairpersons have been urged to submit reports as frequently as warranted (Charlie Bird's phenology reports represent our own regular report by a committee chairperson).

Results of the questionnaire indicate that most members are well satisfied with the AN in its present form, but many would also like to receive other types of magazines or journals.

A detailed report on this questionaire will appear in the next AN.

- Martin K. McNicholl, Chairman

RESOLUTIONS

The following resolutions were passed at the 17th Regular Meeting of the Board of Directors of FAN and 5th Annual Meeting of FAN at Banff, 20 September, 1975.

1. Be it resolved that FAN memberships run for a period of one year from the date of their purchase and that receipt of the publication start with the current issue (Previous issues are available on request).

2. Be it resolved that FAN support the nomination of the C.N.F. for a White Owl Conservation Award.

3. Be it resolved that FAN ratify the arrangement with the Percy Page Centre for the current year and next year and that it investigate ways the club can use the Centre's facilities.

4. Be it resolved that the corresponding secretary assume the responsibility of issuing and sending receipts and of depositing.

5. Be it resolved that as of September 1st, 1975, the honorarium to the Corresponding Secretary be increased from $25.00/month to $50.00/month, effective to the end of the year, at which time it will come under review.

6. Be it resolved that the Chairman of the Publications Committee make application to the appropriate officer under section 7biii of the Alberta Heritage Act for a grant to alleviate publication and editorial costs of the "Alberta Naturalist."

7. Be it resolved that the Government of Alberta establish policy guidelines and protection through legislation to conserve a comprehensive system of ecological reserves and natural areas representative of all ecological systems in Alberta.

8. Be it resolved that the Government of Alberta act at an early date to name the Great Horned Owl as a provincial bird.

9. Be it resolved that FAN change the financial year to the calendar year and that the time of the Annual General Meeting be designated as the Winter Meeting.

At a Special General Meeting in Calgary at 1:30 p.m. on February 14, the following Extraordinary Resolution to amend the By-laws was passed:

Amend By-law 3 by deleting Section (a) and replacing it by:

"(a) The Board of Directors of the Federation shall meet together not less frequently than twice each year. One of these meetings shall be within three months of the start of the calendar year and shall be designated as the Annual General Meeting of the Board. The President shall be responsible for calling meetings of the Board of Directors."

Amend By-law 4 by the addition of a new section:

"(g) The financial year of the Federation shall be the calendar year."

Resolutions passed at the 18th Regular Meeting of the Board of Directors in Calgary on 14 February, 1976, will be published in the next AN.

CLUB LIBRARY RELOCATED

The FAN library is currently housed in the Percy Page Centre, 13 Mission Avenue, St. Albert, Alberta.

CLUB NEWS

ALBERTA NATURAL HISTORY SOCIETY

GAETZ LAKE REPORT

P.A.R.D. Associates have finally submitted their report to the Gaetz Lake Committee.

They propose surrounding the sanctuary with a buffer zone, to protect fragile areas of the sanctuary and to provide a wildlife corridor to the river.

They propose a Nature Park but as much of the land they suggest using is presently privately owned, I cannot reveal the exact contents of their reports at this time. The Department of Public Works have indicated their willingness to transfer the title to a more appropriate Provincial Government Department. They will also rectify damage done to the escarpment by a leaky sewer line and garbage deposited by the institution.

The Gaetz Lake Citizens Committee have requested a meeting with the City of Red Deer Highways Department, to discuss proposals to build a highway adjacent to the west lake.

The Committee has approached Mr. Yurko for his reaction but have not yet received an answer.

BOW VALLEY NATURALISTS

The BVN spring program includes: March 24, Banff National Park Warden Bill Vroom and Dr. Stephen Herrero, U. of C. Faculty of Environmental Design will join forces to present a program on the behaviour of grizzly bears. On April 28, Dr. Lionel Jackson of U. of C.'s Kananaskis Environmental Sciences Centre, will give a talk, with slides, on some of the environmental problems associated with open-pit mining.

The Bow Valley Naturalists are to be congratulated on successfully organizing two Christmas Bird Counts this year. Results appear elsewhere in this issue.

BUFFALO LAKE NATURALISTS CLUB

by Lloyd Greenlee

The Buffalo Lake Naturalists Club held their annual meeting the evening of January 15, 1976 under the chairmanship of President Eric Smith. Officers for 1976 were elected, as follows: President - Eric Smith, Vice-President - Virginia Maitland, Treasurer - Elsie Cruikshank, Reporter - Lloyd Greenlee, Librarian - Elsie Doak, Financial Directors - Edith Clark and Virginia Maitland. The above were all elected for their second terms; Edna Heywood was elected as secretary to replace Bernice Greenlee, who has served two terms in that capacity.

Eric Smith gave a report on the club's activities during 1975, and some of the highlights follow:

On Sunday, February 23, some members of the club joined with members of the Alberta Natural History Society of Red Deer for skiing, snowshoeing, hiking and a wiener roast at Content Bridge on the Red Deer River.

In May it was learned that Lloyd Lohr was one of the big winners in the photographic contest sponsored by the Battle River Tourist Association, having won prizes in three categories.

On Sunday, June 8, members of the club enjoyed an outing at the Maitland home on the shores of Buffalo Lake.

In June, also, Virginia Maitland's illustration of prairie crocuses appeared on the cover of the Alberta Naturalist.

The July meeting was held at the Clifford Clark home north of Erskine, and featured a trip to the Narrows of Buffalo Lake, and a potluck supper. On Sunday, July 20, a hot summer day, members of the club joined with members of the Red Deer club on a field trip to Dry Island Buffalo Jump provincial park, near Huxley.

Lloyd Lohr participated in the Labor Day weekend canoe trip on the Red Deer River - a somewhat cold and wet experience.

On October 12 the club held an enjoyable hike in the Ewing Lake district southwest of Stettler, when 28 species of birds were counted.

The November meeting of the club was held in the office of Stettler County Fieldman, Bill Bauer, this being his third appearance during the year as guest speaker.

On December 26, members of the club took part in the Christmas Bird Count at Big Knife Provincial Park, north of Halkirk.

HIGH RIVER NATURALIST CLUB

by Ruth Harrowing, President

The formation of the High River Naturalist Club in November, 1975 was, in part, the response of a dozen or so people in this area to a need for planning a bird and wildlife sanctuary within the town limits. The Town Planning Committee had included a sanctuary area in its long range plan for High River's growth. As the time approaches to implement this part of the plan, the committee felt the need for some knowledgable group to help set up this area.

Once the club began meeting, we found many natural areas needed to be studied around the community before any expansion of the town takes place. We are also sponsoring a bird identification course in February and a plant identification course in March. As well as a study of the sanctuary area, which we have begun, we hope to be involved in the development of it. Some members of the group are interested in nature photography, so some activities are being planned in this field.

It looks like a busy year ahead for this newly-formed group of nature enthusiasts.

EDMONTON CLUBS

Both Edmonton clubs have had busy fall seasons, with interesting speakers each month. A full report pf these speakers will appear in the next Alberta Naturalist. The clubs are currently negotiating with the Edmonton Chapter of the National and Provincial Parks Assoc. of Canada and Edmonton's new Nature Centre in sponsoring next year's Audubon film series. The Edmonton Bird Club has been the only sponsor of these films in the past. The Edmonton Bird Club elected the following slate of officers in September: Past President - Ludo Bogaert; President - Graeme Greenlee; Hon. President - Robert Lister; Vice-President - Barbara Robinson; Secretary - Eric Wallace; Treasurer - John Young; Field Secretary - Dr. Robert Turner; Audubon Rep. - Graeme Greenlee; Directors - Ron McElhaney, Martin McNicholl, Jack Park, Joan Evans, Tom Webb; Librarian - Miles Hennie; FAN Reps. - Graeme Greenlee and Eric Wallace. The Edmonton Natural History Club elected the following slate of officers in January: Past President - Martin K. McNicholl; President - Marg Reine; Vice-President - Bruce Bembridge; Secretary - Gail Bembridge; Treasurer - Fred Coffey; Directors - Betty Bulmer, Eileen Coffer, Peter Demulder, Deirdre Griffiths, Dr. John M. Powell, Fred Tarlton, Dr. C. Eric Tull, Dr. D.V. (Chip) Weseloh (Editor); FAN Reps. - Martin McNicholl and Jack Park. Both clubs are currently involved in planning the May FAN meeting. Robert Lister's book on birds at Beaverhill Lake is well in progress. The Edmonton Natural History Club will present the first annual Loran L. Goulden Memorial Award in March. The committee in charge of the first two awards is: Gwen Goulden, Martin K. McNicholl, Dr. Charles D. Bird, and Dr. D.V. (Chip) Weseloh.

Submissions are welcomed from all naturalists in Alberta at any time. Deadline for the second award will probably be about December 1, 1976. The objectives and terms of reference for the award follow.

- Martin K. McNicholl

LORAN L. GOULDEN MEMORIAL AWARD

OBJECTIVES: The Loran L. Goulden Memorial Award is intended to encourage interest in and knowledge of natural history in Alberta.

TERMS OF REFERENCE:

1. The award will be presented annually at the Annual General Meeting of the Edmonton Natural History Club.
2. The award will recognize a specific contribution to nature study in the province of Alberta by any person or group of persons, regardless of age, occupation, residence, or club membership.
3. Preference will be given to persons still actively engaged in the research or writing recognized by the award, but the award may also be given in recognition of a completed project.
4. Similarly, preference will also be given to amateur efforts, but professionals will not be excluded from receiving the award.
5. All areas of natural history will be considered.
6. The award will consist of annual interest on the memorial fund.
7. A selection committee, approved by the Executive of the Edmonton Natural History Club, will administer the award each year. This committee of four persons will consist of at least one Executive member of ENHC and at least one person professionally qualified to judge the merits of individual projects. As long as feasible, the committee will also include one person thoroughly familiar with the interests and work of Loran L. Goulden.
8. Suggestions for the award may be made by any naturalist in Alberta. Documentation supporting the proposed candidate will be preferable. Deadlines for submission of suggestions will be determined by the Selection Committee.

9. Recipients of awards will be encouraged to publish the results of their work in an appropriate journal, except in cases where the award is given for publications.

10. In case no suitable candidate is found, the award need not be given in a particular year.

NOTES AND NEWS

Alberta Banders, 1974

The annual report of the Western Bird Banding Association published in Western Bird Bander 50(2): 24-35, 1975, lists Edgar T. Jones of Edmonton as bander with the highest total birds banded (2225) and second highest number of species (87). Ed banded the highest number of the following species in the region covered (Alberta, British Columbia and 13 U.S. states): Common (Yellow-shafted) Flicker (1), Downy Woodpecker (5), Eastern Kingbird (22), Traill's Flycatcher (64), Least Flycatcher (97), Black-capped Chickadees (39), Gray Catbird (46), Brown Thrasher (14), Swainson's Thrush (75), Gray-cheecked Thrush (10), Veery (1), Red-eyed Vireo (17), Philadelphia Vireo (13), Black-and-white Warbler (15), Tennessee Warbler (386), Yellow Warbler (159), Yellow-rumped (Myrtle) Warbler (247), Black-throated Green Warbler (6), Blackpoll Warbler (84), Ovenbird (60), Northern Waterthrush (27), Mourning Warbler (11), Canada Warbler (4), American Redstart (69), Northern (Baltimore) Oriole (13), Dark-eyed (Slate-colored) Junco (89), Chipping Sparrow (121), Clay-colored Sparrow (34), and White-throated Sparrow (52). Ed tied for highest numbers of hybrid flicker (1), Magnolia Warbler (13), Cape May Warbler (3), Connecticut Warbler (2), and Rose-breasted Grosbeak (8). Bob (R.E.) Gehlert banded the highest numbers (in fact, only) of Hawk Owls (20) and Great Gray Owls (15). J. Cam Finlay banded the highest numbers of Eastern Phoebe (9), Tree Swallow (885), Purple Martin (87), Blue Jay (13), and Mountain Bluebird (287), and tied for Bohemian Waxwing (1). Dr. Tom W. Barry and Martin K. McNicholl are other Alberta banders listed with species highs in the report, but only for birds banded outside Alberta. -M.K.M.

Peregrine Plight Improves

The October 1975 issue of the Peregrine Fund Newsletter reports considerable captive breeding success in 1975.

More important to the ultimate success or failure of the program, however, is the report of the first successful introductions of young captive-reared birds into the wild. In spite of the loss of two young to Great Horned Owl predation and the near loss of a brood to lightning, 12 out of 16 young introduced to the wild reached a stage of independence after accepting both historical and man-made eyrie sites, and later migrated. These hopeful signs cannot yet be viewed with complacency, however, as the critical tests remain: will the young return to breed, and if so will they successfully rear young? Persons wishing to support this program should write - The Peregrine Fund, Cornell University Laboratory of Ornithology, 159 Sapsucker Woods Road, Ithica, New York 14853, U.S.A. - M.K.M.

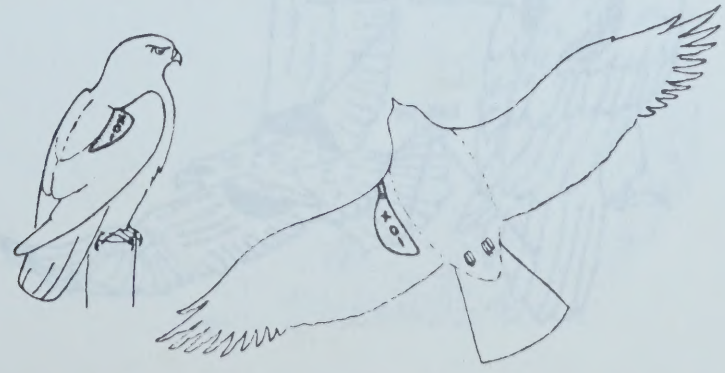
REQUESTS FOR INFORMATION

Color-marked Swainson's Hawks

Nestling Swainson's Hawks have been fitted with red, green, or blue vinyl patagial wing markers in the Columbia Basin of southcentral Washington. The markers are crescent-shaped and will be visable on flying and on perching birds (see sketches). These markers will carry the symbol X of A, followed by two numerals (ex. X08, A23). Each hawk will wear a single patagial marker on its right wing.

Post-fledging behavior, migration, and nest-site selection are some of the important points being studied.

Should you see any of these birds, please write: Richard Fitzner, Ecosystems Department, Battelle Northwest Laboratories, Richland, WA 99352. Include date, time of day, and location of observation, together with name of observer(s), color of marker and, if possible, the numbers printed on the marker. Also include the number of Swainson's Hawks associated with the marked individual(s).



WANTED ALIVE

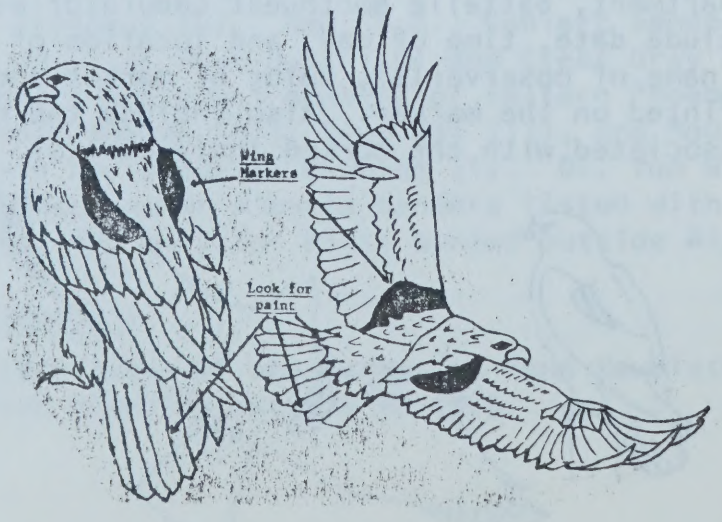
The Bureau of Land Management is conducting a long-termed study on the ecology of raptors in Snake River Birds of Prey Natural Area, located 35 miles south of Boise, Idaho. The greatest known concentration of breeding raptors in the world has been protected by a land withdrawal by BLM and additional withdrawals are pending. Multi-faceted research has been initiated to determine breeding biology, population dynamics and hunting territory utilized by birds of prey, population dynamics of their prey species, and the impact of non-avian predators upon this prey base. Juvenile birds of prey were marked to aid in their identification within the study area and to provide additional data on migration routes and wintering areas. This information is vital for a complete understanding of raptor biology and can aid in the management of the BPNA.

Color-coded vinyl wing markers and/or yellow "paint" have been placed on juvenile birds of prey to help determine post-fledging movement. Wing markers and tail paint, as illustrated, may show only on the dorsal surfaces of the birds.

Ninety-three birds (Golden Eagles, Prairie Falcons, Red-tailed Hawks and Common Ravens) were marked this year, and the program will continue until 1980.

Information needed: (1) Species of bird and how marked, (2) Location of sighting (state, county, distance from nearest landmark); (3) Date of sighting; (4) Observer's name and address; (5) Activity and condition of the bird.

Please send information to Dean Bibles, District Manager Boise District, Attn: Mike Kochert, Bureau of Land Management, 230 Collins Road, Boise, Idaho 83702.



The Alberta Naturalist is published quarterly by the Federation of Alberta Naturalists. Any material printed for the first time in the AN may be reproduced without permission. Credit lines will be appreciated.

Deadlines for submission of material to the Editor are: February 15, May 15, August 10 and November 15. Please include your address. All maps, charts, etc., should be submitted on white paper, of the appropriate size for publication, preferably done in type and/or india ink.

FAN membership fees are $2.00 per year regular, $10.00 supporting, tax deductible ($8.00 worth). Mail remittance to: Federation of Alberta Naturalists , Box 1472, Edmonton, Alberta T5J 2N5.

BOARD OF DIRECTORS

Past President: Dr. Frank Harper, Lethbridge, Alberta
President: Dorothy Broadbent, R.R. #4, Red Deer, Alberta
Vice-President: Lloyd Lohr, Box 1414, Stettler, Alberta
Secretary: Graeme Greenlee, 7215 - 114A Street, Edmonton, Alberta
Corresponding Secretary: Lyman Matthews, 9209 - 162 Street, Edmonton, Alberta
Treasurer: Jack Park, 10236 - 70 Street, Edmonton, Alberta
Appointed Directors: Dr. C.D. Bird, Joy Finaly, Dr. John M. Powell
Directors: G. Greenlee, D. Broadbent, J. Cammaert, E. Clarke, J. Park, Dr. F. Harper, L. Lohr, M.K. McNicholl, V. Maitland, Helen Schuler, M. McIvor, E. Neufeld, J. Minty, T. Delane, E. Wallace
Editor, the Alberta Naturalist: Martin McNicholl
c/o Box 1472, Edmonton, Alberta
Associate Editors: Martin K. McNicholl, Dept. Zoology, U. of A., Edmonton and Mr. J.W. Case, Dept. of Biology, U. of C., Calgary
Patron: Hon. Dr. J.W. Grant MacEwan
Honorary Members: Professor W. Ray Salt, Dr. J. Dewey Soper, and Dr. Kerry Wood

CORPORATE MEMBER CLUBS

Alberta Natural History Society, c/o 41 Springfield Ave., Red Deer, T4N 0C8; Bow Valley Naturalists, Box 1693, Banff, Alberta; Buffalo Lake Naturalists, Box 1414, Stettler, Alta; Calgary Field Naturalists' Society, P.O. Box 981, Calgary, Alta; Edmonton Bird Club, Box 4441, Edmonton, Alta; Edmonton Natural History Club, Box 1582, Edmonton, Alta; and Lethbridge Naturalists' Society, c/o 2630 - 22 Ave., S., Lethbridge, Alta.

If undeliverable
return to:
FAN, Box 1472
Edmonton, Alberta
T5J 2N5

Return Postage
Guaranteed

A41501

Greta Sitwell XD76
#705, 8315-105 St.
Edmonton AB
T6E 4H4

FEDERATION OF ALBERTA NATURALISTS